

show files;ds

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200244
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File 344:CHINESE PATENTS ABS MAY 1985-2002/MAY
(c) 2002 EUROPEAN PATENT OFFICE

File 347:JAPIO Oct 1976-2002/Mar(Updated 020702)
(c) 2002 JPO & JAPIO

File 371:French Patents 1961-2002/BOPI 200209
(c) 2002 INPI. All rts. reserv.

| Set | Items | Description |
|-----|---------|---|
| S1 | 3 | AU='KRYSIK M' OR AU='KRYSIK M D' |
| S2 | 2 | AU='FISH B A' |
| S3 | 4 | AU='MADIGAN D' OR AU='MADIGAN D P' |
| S4 | 1 | (S1 OR S2 OR S3) AND MULCH?(5N) (COLOR? OR FRAGRANC? OR PER-FUM? OR TINTED OR DYED) |
| S5 | 1 | AU='MADIGAN D P' |
| S6 | 449211 | TINT OR TINTED OR DYE OR DYED OR COLOUR? OR COLORED OR COLORANT OR MULTI() COLOR? |
| S7 | 1584 | MULCH |
| S8 | 233387 | COLOR |
| S9 | 1701554 | MATCH? OR SAME OR SIMILAR OR EXACT? |
| S10 | 38460 | PERFUME? OR FRAGRANCE? OR FRAGRANT? OR SCENT? |
| S11 | 18941 | FLOURESCENT? OR GLOW? |
| S12 | 397391 | FLOWER? OR SEED OR SEEDS OR SEEDLING? OR VEGETABLE? OR PLANT OR PLANTS |
| S13 | 15153 | S9(3N) (S6 OR S8) |
| S14 | 1 | S13 AND S12 AND S7 |
| S15 | 127793 | PIGMENT? |
| S16 | 3 | S13 AND S7 |
| S17 | 2 | S16 NOT S14 |
| S18 | 2 | S10(3N)S7 |
| S19 | 0 | S11(3N)S7 |
| ? | | |

7/1 (Item 1 from fil : 350)

DIALOG(R)File 350:Derwent WPIX

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014126630

WPI Acc No: 2001-610840/200170

Colored seed useful as a horticultural or gardening product comprises a seed, a binder, a coating surrounding the seed and a dye and/or pigment within and/or on the coating

Patent Assignee: FISH B A (FISH-I); KRYSIK M D (KRY-S-I); MADIGEN D P (MADI-I)

Inventor: **FISH B A**; **KRYSIK M D**; MADIGEN D P

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|----------------|------|----------|---------------|------|----------|----------|
| US 20010022047 | A1 | 20010920 | US 98113254 | A | 19980710 | 200170 B |
| | | | US 2000510782 | A | 20000223 | |
| | | | US 2000544878 | A | 20000407 | |
| | | | US 2001769076 | A | 20010125 | |

Priority Applications (No Type Date): US 2001769076 A 20010125; US 98113254 A 19980710; US 2000510782 A 20000223; US 2000544878 A 20000407

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|----------------|------|--------|-------------|----------------------------------|
| US 20010022047 | A1 | 15 | A01G-001/00 | CIP of application US 98113254 |
| | | | | CIP of application US 2000510782 |
| | | | | CIP of application US 2000544878 |
| | | | | CIP of patent US 6209259 |

Abstract (Basic): US 20010022047 A1

NOVELTY - A colored seed comprises a seed, a binder, a coating surrounding the seed and a dye and/or pigment within and/or on the coating.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) a fragranced seed comprising a seed and a fragrance;
- (2) a **colored** **mulch** product comprising a material containing a fiber cellulose, clay, loam and/or sand; a binding agent; and the dye and/or pigment;
- (3) a **fragranced** **mulch** comprising the **mulch** product and a **fragrance**;
- (4) a process for coloring seeds involving coating the seed with a slurry, paste, or solid coating; adding a binding agent; and adding a dye to the coating either prior to, during or after the coating is added to the seed.

USE - As a horticultural or gardening product.

ADVANTAGE - The dye is capable of changing colors based on the acidity of soil, in response to the moisture content added to the soil and depending on the chemical content of the soil. The dye or fragrance deters animals from eating the seed. The dye is an environmentally friendly chemical composition. The seed has a color, which assists the seed in absorbing heat and reflecting sunlight. The fragrance or dye assists a user in determining the acidity, moisture content, and chemical content of soil. The fragrance assists a user in locating the seed after application of the seed. The fragrance is approved for use in products directly applied to the skin and provides a scent, which can take on a scent similar to a scent of a product applied.

pp; 15 DwgNo 0/8

Derwent Class: C04; P13

International Patent Class (Main): A01G-001/00

?

17/7/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009400288 **Image available**

WPI Acc No: 1993-093797/199311

Colouring agent applicator for ground wood chips - has chips fed into screw conveyor to contact colouring agent before being drawn out by auger rotation

Patent Assignee: KURTZ BROS INC (KURT-N)

Inventor: RONDY G J

Number of Countries: 037 Number of Patents: 003

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| WO 9303862 | A1 | 19930304 | WO 92US7352 | A | 19920821 | 199311 B |
| US 5192587 | A | 19930309 | US 91749141 | A | 19910823 | 199312 |
| AU 9225654 | A | 19930316 | AU 9225654 | A | 19920821 | 199328 |

Priority Applications (No Type Date): US 91749141 A 19910823

Cited Patents: SU 617083; US 4337720; US 4932156

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|------------|------|-----|----|-------------|--------------|
| WO 9303862 | A1 | E | 14 | B05D-007/06 | |

Designated States (National): AT AU BB BG BR CA CH CS DE DK ES FI GB HU JP KP KR LK LU MG MN MW NL NO PL RO RU SD SE

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA SE

| | | | |
|------------|---|---|-------------|
| US 5192587 | A | 7 | B05D-007/06 |
|------------|---|---|-------------|

| | | | | |
|------------|---|--|-------------|----------------------------|
| AU 9225654 | A | | B05D-007/06 | Based on patent WO 9303862 |
|------------|---|--|-------------|----------------------------|

Abstract (Basic): WO 9303862 A

Comminuted wood is fed into the lower end of an upwardly angled screw conveyor (10) which has an internal auger (14). The wood is contacted by a liq. colour-imparting agent, after which rotation of the auger draws the moist coloured wood towards the conveyor upper end.

Runoff of excess liq. agent returns by gravity to a basin at the conveyor lower end for further contacting newly fed wood. The basin liq. level is monitored and maintained. Coloured wood product discharges through a chute (26) at the conveyor upper end for further drying, if necessary.

USE/ADVANTAGE - Colouring agent applicator provides aesthetically pleasing **mulch** material to compete favourably with bark mulches on market and allows waste lumber to be used, eliminating need for landfill disposal.

Dwg.1/2

Abstract (Equivalent): US 5192587 A

To colour wood chips, includes feeding the comminuted wood into an angularly upwardly positioned screw conveyor having a solid helical auger disposed axially within in close fitting relation to the internal surface of a closed cylindrical channel at its lower first end inlet port, driving the wood chips up along the conveyor by rotation of the auger, supplying aq. colouring soln. to a lower basin portion of the conveyor for colouring the wood chips therein, allowing the wood chips to drain as they pass up the conveyor and discharging the moist coloured wood chips from the upper outlet port of the conveyor.

USE/ADVANTAGE - Used as **mulch**. Provides dark **coloured** **mulch** **similar** to bark chips.

Dwg.1/2

Derwent Class: P42

International Patent Class (Main): B05D-007/06

International Patent Class (Additional): B05C-011/10

17/7/2 (Item 2 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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007733921

WPI Acc No: 1988-367853/198851

Method of making dark, uniformly-coloured, hardwood **mulch - involves forming mass of large-fibre hardwood pulp and passing through mass to sufficiently saturate until dark colour is obtained**

Patent Assignee: ZEAGER C B (ZEAG-I)

Inventor: ZEAGER B C

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| US 4788790 | A | 19881206 | US 86871326 | A | 19860606 | 198851 B |

Priority Applications (No Type Date): US 86871326 A 19860606

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|------------|------|-----|----|----------|--------------|
| US 4788790 | A | | 3 | | |

Abstract (Basic): US 4788790 A

The method of making a dark, uniformly-coloured hardwood **mulch** comprises of forming a mass of large-fibred, hardwood pulp consisting essentially of 20-100% by weight of large-fibred hardwood bark pulp, and 0-80% by weight of large-fibred hardwood wood pulp, most of the large fibres being acicular. Then passing water through the mass in an amount in excess of that sufficient to saturate said mass. Recycling excess water through the mass until a substantially uniform, dark colour is obtained.

Oxidation plays a part in procucing the dark colour and im improving the rot resistance of the **mulch**. The large-fibred bark pulp is just about the **same** **colour** as the large-fibred wood pulp when the pile of fibres is first formed and before water recycling has taken and the pile is worked over and mixed by handling equipment, preferably a bulldozer.

ADVANTAGE - Not only does such handling increase the darkening, doubtless by further oxidation, but it renders the entire mass more uniformly coloured by admixing any lighter and darker regions

Derwent Class: P13

International Patent Class (Additional): A01G-007/00

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18/7/1 (Item 1 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
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014126630

WPI Acc No: 2001-610840/200170

Colored seed useful as a horticultural or gardening product comprises a seed, a binder, a coating surrounding the seed and a dye and/or pigment within and/or on the coating

Patent Assignee: FISH B A (FISH-I); KRYSIK M D (KRY-S-I); MADIGEN D P (MADI-I)

Inventor: FISH B A; KRYSIK M D; MADIGEN D P

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|----------------|------|----------|---------------|------|----------|----------|
| US 20010022047 | A1 | 20010920 | US 98113254 | A | 19980710 | 200170 B |
| | | | US 2000510782 | A | 20000223 | |
| | | | US 2000544878 | A | 20000407 | |
| | | | US 2001769076 | A | 20010125 | |

Priority Applications (No Type Date): US 2001769076 A 20010125; US 98113254 A 19980710; US 2000510782 A 20000223; US 2000544878 A 20000407

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|----------------|------|-----|----|-------------|----------------------------------|
| US 20010022047 | A1 | | 15 | A01G-001/00 | CIP of application US 98113254 |
| | | | | | CIP of application US 2000510782 |
| | | | | | CIP of application US 2000544878 |
| | | | | | CIP of patent US 6209259 |

Abstract (Basic): US 20010022047 A1

NOVELTY - A colored seed comprises a seed, a binder, a coating surrounding the seed and a dye and/or pigment within and/or on the coating.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

- (1) a fragranced seed comprising a seed and a fragrance;
- (2) a colored mulch product comprising a material containing a fiber cellulose, clay, loam and/or sand; a binding agent; and the dye and/or pigment;
- (3) a ****fragranced**** ****mulch**** comprising the ****mulch**** product and a ****fragrance****; and
- (4) a process for coloring seeds involving coating the seed with a slurry, paste, or solid coating; adding a binding agent; and adding a dye to the coating either prior to, during or after the coating is added to the seed.

USE - As a horticultural or gardening product.

ADVANTAGE - The dye is capable of changing colors based on the acidity of soil, in response to the moisture content added to the soil and depending on the chemical content of the soil. The dye or fragrance deters animals from eating the seed. The dye is an environmentally friendly chemical composition. The seed has a color, which assists the seed in absorbing heat and reflecting sunlight. The fragrance or dye assists a user in determining the acidity, moisture content, and chemical content of soil. The fragrance assists a user in locating the seed after application of the seed. The fragrance is approved for use in products directly applied to the skin and provides a scent, which can take on a scent similar to a scent of a product applied.

pp; 15 DwgNo 0/8

Derwent Class: C04; P13

International Patent Class (Main): A01G-001/00

18/7/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX
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004517275

WPI Acc No: 1986-020619/198603

Agglomerated cellulosic particles mfr. - from moist fibrous blend in horizontal rotating drum, compacting particle surface and drying

Patent Assignee: KIMBERLY CLARK CORP (KIMB)

Inventor: HARKE F W; JOHNSON R L; SOKOLOWSKI R C

Number of Countries: 001 Number of Patents: 001

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|------------|------|----------|-------------|------|----------|----------|
| US 4560527 | A | 19851224 | US 84603391 | A | 19840424 | 198603 B |

Priority Applications (No Type Date): US 84603391 A 19840424

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|------------|------|-----|----|----------|--------------|
| US 4560527 | A | | 10 | | |

Abstract (Basic): US 4560527 A

Cellulosic particles are made by: (a) forming individual agglomerated particles from a moist blend of fibres, aggregates and/or fibre sized pieces of a fibrous cellulosic material in a horizontal rotating drum; (b) compacting the particles' surface to form a densified skin free of protruding fibrils; (c) drying the particles. After step (b), the particles may be partially dried to a 30-50 wt.% moisture content, formed into platelets and then dried to a moisture content of 10 wt.% or less, pref. 5 wt.%.

USE/ADVANTAGE - The particles are esp. useful as an animal litter and are light, dust free, absorbent, easy to clean up and wick away free liquid and allow absorbed moisture to evaporate to prevent bacterial growth. Other uses include floor sweeping material, packing material, ****mulch****, or carrier for ****scents****, disinfectants and germicides.

0/4

Derwent Class: D22; F09

International Patent Class (Additional): B29C-067/02

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11/3,K/1 (Item 1 from file: 5)
 DIALOG(R)File 5: Biosis Previews(R)
 (c) 2002 BIOSIS. All rts. reserv.

13199968 BIOSIS NO.: 200100407117

**Relative effectiveness of control mechanisms for juvenile English ivy
 (Hedera helix) as measured by leaf respiration and root-crown starch
 content.**

AUTHOR: Bauerle Taryn; Chalker-Scott Linda
 JOURNAL: Hortscience 36 (3):p431 June, 2001
 MEDIUM: print
 CONFERENCE/MEETING: 98th Annual International Conference of the American
 Society for Horticultural Science Sacramento, California, USA July 21-25,
 2001
 ISSN: 0018-5345
 RECORD TYPE: Abstract
 LANGUAGE: English
 SUMMARY LANGUAGE: English

...ABSTRACT: Each plot was subjected to one of six treatments: control,
 steam, pulling (removal), Roundup, steam + **mulch**, and injury
 (pruning) + **mulch**. While all **plants** contained the **same** amount
 of root-crown starch prior to treatment, levels were significantly lower
 in plots that...

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>>> or undefined in one or more files.

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Processed 10 of 21 files ...

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64 S11

6604002 PD=980710 : PD=020716

S12 64 S11 NOT PD=980710:020716

?t 12/ti/3-6

>>>No matching display code(s) found in file(s): 306

12/TI/3 (Item 3 from file: 5)
 DIALOG(R)File 5:(c) 2002 BIOSIS. All rts. reserv.

**Effect of mulch surface color on root-knot of tomato grown in simulated
 planting beds.**

12/TI/4 (Item 4 from file: 5)
 DIALOG(R)File 5:(c) 2002 BIOSIS. All rts. reserv.

**Recycled waste paper as a non-chemical alternative for weed control in
 container production.**

12/TI/5 (Item 5 from file: 5)
 DIALOG(R)File 5:(c) 2002 BIOSIS. All rts. reserv.

**Colored mulches affect yield of fresh-market tomato infected with
 Meloidogyne incognita.**

12/TI/6 (Item 6 from file: 5)
 DIALOG(R)File 5:(c) 2002 BIOSIS. All rts. reserv.

**A test system with limited beds for evaluation of growing methods, applied
 to ecologically cultivated greenhouse tomatoes (Lycopersicon esculentum
 Mill.).**

?t 12/7/all
>>>Format 7 is not valid in file 143

12/7/1 (Item 1 from fil : 5)
DIALOG(R)File 5:BIOSIS Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

13199968 BIOSIS NO.: 200100407117

**R lative effectiveness of control mechanisms for juvenile English ivy
(Hedera helix) as measured by leaf respiration and root-crown starch
content.**

AUTHOR: Bauerle Taryn; Chalker-Scott Linda
JOURNAL: Hortscience 36 (3):p431 June, 2001
MEDIUM: print
CONFERENCE/MEETING: 98th Annual International Conference of the American
Society for Horticultural Science Sacramento, California, USA July 21-25,
2001
ISSN: 0018-5345
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: Urban parks in Seattle, WA, and other Pacific Northwest cities continue to be inundated by invasive weeds such as English ivy (*Hedera helix*). Once a desirable ornamental, this species outcompetes native vegetation and is now actively eradicated by park managers. To date, removal methods are based on anecdotal evidence and are only temporarily successful, as *H. helix* usually recovers and sprouts from underground meristems. To determine an effective control mechanism, the ecophysiology of *H. helix* must be understood. The objective of this study was to compare the physiological impacts of ivy control methods via changes in respiration, root starch, and regrowth. Five treatments (gibberellic acid (GA3), Roundup, injury (pruning), mulch, and heat) were tested upon greenhouse-grown plants. Results show that GA3-treated plants were not significantly different from the controls, while the hot water and injury treatments were most successful at lowering the plant's respiration. Root starch yielded similar results with control and GA3-treated plants retaining high starch reserves, while injury significantly lowered starch. Based upon these greenhouse studies, field plots were delineated in an urban park with significant ivy infestation. Each plot was subjected to one of six treatments: control, steam, pulling (removal), Roundup, steam + **mulch**, and injury (pruning) + **mulch**. While all **plants** contained the **same** amount of root-crown starch prior to treatment, levels were significantly lower in plots that were injured and mulched. Starch levels and regrowth continue to be monitored in all plots. The results of this study will allow park managers to effectively combat English ivy and perhaps other invasive weeds in a scientifically defensible way.

12/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

12589465 BIOSIS NO.: 200000342967

**Seeding and mulching treatments as conservation measures of two burned
soils in the Central Ebro Valley, NE Spain.**

AUTHOR: Badia David(a); Marti Clara
AUTHOR ADDRESS: (a)Area de Produccion Vegetal, Escuela Universitaria
Politecnica, Crtra. Cuarte s/n, 22071, Huesca**Spain
JOURNAL: Arid Soil Research and Rehabilitation 14 (3):p219-232
July-September, 2000
MEDIUM: print

ISSN: 0890-3069
 DOCUMENT TYPE: Article
 RECORD TYPE: Abstract
 LANGUAGE: English
 SUMMARY LANGUAGE: English

ABSTRACT: The effectiveness of seeding introduced species, with or without straw mulching, was tested as a measure of post-fire erosion control in gypsiferous (Xeric Haplogypsid) and calcareous soils (Xeric Torriorthent) in Central Ebro Valley (NE-Spain). Paired control, seeding, and combined seeding and mulching plots were established in four replicated plots for each soil tested. Seeding rate was 30 g m⁻² and straw mulch was applied at 100 g m⁻² in each plot. Plant projective cover (total and specific), plant biomass, bare soil cover and sediment yield were determined over a 2-year period. During the first year of sampling, species introduced by seeding increased plant cover (about 30%) without significant differences observed between soils. ****Plant**** cover was ****similar**** in seeding-only and seeding-****mulching**** treatments, although the latter treatment significantly enhanced plant weight. During the second year these differences disappeared because species introduced by seeding practically did not survive. So, the introduced herbs did not interfere with native plants. Bare soil cover remained significantly lower in treated plots than on the control plots for both soils during both years of sampling. In the second year, the reduction of bare soil was attributed to both the straw mulch and litter from the seeding species. Soil protection was significantly higher in calcareous soils than in gypsiferous soils which is related to their physical and chemical properties. Cumulative sediment yield decreased significantly over time with both treatments on both soils. Soil losses from control plots were three times higher than seeding plots and 3.3 times higher than from seeding and mulching plots in gypsiferous soils. Soil losses from control plots were two times higher than from seeding plots and 2.7 times higher than the combined seeding and mulching plots in the calcareous soils. Cumulative soil loss was higher from the gypsiferous soils than from the calcareous soils due to the lower plant cover.

12/7/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)
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12507920 BIOSIS NO.: 200000261422

Effect of mulch surface color on root-knot of tomato grown in simulated planting beds.

AUTHOR: Fortnum B A(a); Kasperbauer M J; Decoteau D R

AUTHOR ADDRESS: (a)Department of Plant Pathology and Physiology, Pee Dee Research and Education Center, Clemson University, Florence, SC, 29506-9706**USA

JOURNAL: Journal of Nematology 32 (1):p101-109 March, 2000

MEDIUM: print.

ISSN: 0022-300X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: The effect of different-colored polyethylene mulches on quantity and spectra of reflected light, plant morphology, and root-knot disease was studied in tomato (*Lycopersicon esculentum*) grown in simulated planting beds. Tomato plants were inoculated with *Meloidogyne incognita* at initial populations (Pi) of 0, 1,000, 10,000, or 50,000 eggs/plant, and grown in a greenhouse for 50 days over white, red, or black mulch. Soil temperature was kept constant among the mulch treatments by placing

an insulation barrier between the colored mulch and the soil surface. Soil temperature varied less than 0.5 degreeC between soil chambers at solar noon. Tomatoes grown over white mulch received more reflected photosynthetic light and had greater shoot weights (27%), root weights (32%), and leaf area (20%) than plants grown over black mulch. Plants grown over red mulch received a higher far-red-to-red ratio in the reflected light. Mulch color altered the plant's response to root-knot nematode infection by changing the distribution of mass in axillary shoots. At high Pi, axillary leaf area and leaf weight were greater in tomato grown over white mulch than when grown over red mulch. The root-gall index was lower for ****plants**** grown over white ****mulch**** than ****similar**** ****plants**** grown over red ****mulch****.

12/7/4 (Item 4 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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11522052 BIOSIS NO.: 199800303384

Recycled waste paper as a non-chemical alternative for weed control in container production.

AUTHOR: Smith D R; Gilliam C H; Edwards J H; Olive J W; Eakes D J; Williams J D

AUTHOR ADDRESS: Dep. Hortic., Auburn Univ., Auburn, AL 36849**USA

JOURNAL: Journal of Environmental Horticulture 16 (2):p69-75 June, 1998

ISSN: 0738-2898

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Studies were conducted to evaluate recycled waste paper mulch as a means of controlling weeds in the production of container-grown crops. Two forms of recycled waste paper products were evaluated-pelletized and crumbled. Both were tested at two depths, 12.5 mm (0.5 in) and 25 mm (1 in). A fabric disk and a fabric disk treated with Spin Out were also evaluated. With both the recycled waste paper mulch treatments and the fabric disk treatments, spurge seed were sown either under or on top of the treatment. Recycled waste paper pellets applied to a depth of 25 mm (1 in) suppressed spurge germination, regardless of whether spurge seed were sown on top of the mulch or under the mulch. Recycled crumble provided poor spurge control at both depths, and there was increased spurge growth when spurge were sown on top of the mulch compared to when the seed were sown under the crumble mulch. Pellets at the 25 mm (1 in) depth, provided weed control equal to that of Rout (oxyfluorfen + oryzalin) herbicide. Results from the fabric disks showed limited spurge control was obtained with any treatment. Fabric disks allowed weed growth around the container circumference and in the area where the disk fits around the ****plant****. Both cultivars of azaleas grown with recycled waste paper ****mulch**** were generally ****similar**** in size to non-treated control ****plants**** and Rout treated plants at 240 DAT (days after treatment). At 550 DAT plant growth was similar among all treatments except 'Fashion' azalea had smaller growth indices when grown with pellets compared to those grown with crumble. Container medium solution pH and electrical conductivity (soluble salts) were within the recommended range for acceptable plant growth. Research suggests that pellets applied at 25 mm (1 in) should provide effective non-chemical weed control resulting in less herbicide use and/or fewer hours of labor for weeding.

12/7/5 (Item 5 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

11436436 BIOSIS NO.: 199800217768

**Colored mulches affect yield of fr sh-mark t tomato infected with
Meloidogyne incognita.**

AUTHOR: Fortnum B A(a); Decoteau D R; Kasperbauer M J

AUTHOR ADDRESS: (a)Dep. Plant Pathol. Physiol., Clemson Univ., Pee Dee Res.
Educ. Cent., Florence, SC 29501-9603**USA

JOURNAL: Journal of Nematology 29 (4):p538-546 Dec., 1997

ISSN: 0022-300X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The effects of different-colored polyethylene mulches on the quantity and spectra of reflected light, earliness of fruit set, fruit yield and quality, and root-knot disease were studied in field-grown, staked tomato (*Lycopersicon esculentum*). White mulch reflected more photosynthetic light and a lower far-red-to-red ratio than red mulch, whereas black mulch reflected less than 5 percent of any color. Soil temperatures and fruit yields were recorded for tomato plants inoculated with *Meloidogyne incognita* race 3 at initial populations of 0, 1,000, 10,000, 50,000, or 100,000 eggs/plant and grown over black, white, or red plastic mulch in both spring and fall. Soil temperatures were lower under white mulch than under red or black mulch. Tomato yields declined as inoculum level increased. Plants grown over red mulch in the spring and inoculated with 50,000 eggs of *M. incognita* had greater early marketable yields than similarly inoculated plants grown over black or white mulch. Tomato plants inoculated with 100,000 eggs and grown over white mulch or red mulch in the spring had greater total yields per plot than
similar **plants** grown over black **mulch** (7.39 kg and 7.71 kg vs. 3.65 kg, respectively).

12/7/6 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

11266670 BIOSIS NO.: 199800048002

**A test system with limited beds for evaluation of growing methods, applied
to ecologically cultivated greenhouse tomatoes (*Lycopersicon esculentum*
Mill.).**

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JOURNAL: Biological Agriculture & Horticulture 14 (4):p291-301 1997

ISSN: 0144-8765

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A test system for fertilization studies of greenhouse crops was designed during the period 1990-1992. The growth substrate was kept in separated beds, constructed as large shallow boxes, in which cultivation could be performed with good control of nutrient inputs and losses. The system had qualities for controlled growing similar to pot experiments, without having their disadvantage of holding small volumes of test substrate. All types of fertilizers might be supplied to the growing system. As the drainage water could be collected from each bed in the test system, it was also possible to determine the risks for nutrient losses with subsequent polluting effects. The test system was applied on ecologically cultivated greenhouse tomatoes, obtaining their nutrients from a substrate of farmyard manure compost and **mulch** of freshly cut **plant** material. The yield obtained was **similar** to that from conventionally cultivated greenhouse tomatoes. The described growing

system, allowing good control of the nutrient flow in full scale cultivation, is suitable for nutrient studies of both ecologically and conventionally cultivated plants. However, it can also be a tool for solving a wide range of other questions concerning cultivating systems, substrates and mulch.

12/7/7 (Item 7 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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10928277 BIOSIS NO.: 199799549422

Increased yield of heat-tolerant tomatoes with deep transplanting morning irrigation, and white mulch.

AUTHOR: Hanna H Y(a); Millhollon E P; Herrick J K; Fletcher C L

AUTHOR ADDRESS: (a)La. State Univ. Agric. Center, La. Agric. Experiment Station, Red River Res. Station, P.O. Box 8**USA

JOURNAL: Hortscience 32 (2):p224-226 1997

ISSN: 0018-5345

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Studies were conducted in Fall 1994 and Summer 1995 to determine growth and yield response of heat-tolerant tomatoes (*Lycopersicon esculentum* Mill.) to transplant depth, time of daily irrigation, and polyethylene mulch color. Five-week-old tomato transplants were planted to a depth of either 7.5 or 15.0 cm, drip irrigated every other day for 2.5 h starting at either 7:30 AM or 2:30 PM for 80 d following transplanting, and mulched with white-surface (white on black) or black polyethylene. Soil temperatures were recorded daily at 4:00 PM for 21 d from the beginning of fruit set (2 weeks following transplanting) until the tomato canopy shaded the mulch surface. Transplanting tomatoes to a depth of 15.0 cm significantly increased marketable yield in both years and the total yield in 1 year of this study. Mean fruit mass was not influenced by transplant depth, but plant dry mass was significantly increased by deeper transplanting in 1995. Morning irrigation increased the marketable and total yields and mean fruit mass in both years and **plant** dry mass in 1995. White-surface **mulch** had a **similar** effect on yield and fruit mass. Soil temperature was significantly lower at the 15.0-cm depth than at 7.5 cm in both years. Morning irrigation and white-surface polyethylene mulch also significantly reduced soil temperature in both years.

12/7/8 (Item 8 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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09968758 BIOSIS NO.: 199598423676

Color mulches influence yield and insect pest populations in tomatoes.

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JOURNAL: Journal of the American Society for Horticultural Science 120 (5):p778-784 1995

ISSN: 0003-1062

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Field studies were conducted for three seasons, Fall 1988 and Spring and Fall 1989, on the effect of six mulch colors: blue, orange, red, aluminum, yellow, and white (fall) or black (spring), on fruit

yields and on insect vectors of 'Sunny' tomato (*Lycopersicon esculentum* Mill.). Plant growth and yields were inconsistent with mulch colors during the three seasons. In Fall 1988, in a once-over harvest, extra-large (gtoreq 70 mm diameter) and marketable fruit yields were higher (P ltoreq 0.05) on blue than on the conventional white mulch. In Spring 1989, early marketable yields on red mulch were higher than on black mulch, and in Fall 1989, under high stress from tomato mottle virus (TMoV) transmitted by silverleaf whitefly (*Bemisia argentifolii* (Bellows and Perring)), seasonal yield of extra-large fruit was better on orange than white mulch. In Fall 1988 and 1989, fruit size and marketable yields were reduced on yellow mulch. Aphids (Aphididae), thrips (Thripidae), and whiteflies were counted monthly in traps placed on the mulched beds. Aphids were least numerous on the aluminum and yellow and most numerous on the blue mulch. Where differences occurred, the fewest thrips were captured on aluminum and the fewest whiteflies were captured on the yellow, aluminum and orange mulches. Although differences were not always significant, the fewest adult whiteflies also were observed on foliage of tomato plants grown on these latter three mulches. Later in the seasons, as **plant** foliage covered the **mulch**, differences in the number of insects captured were **similar** for all **mulch** colors. Low numbers of whiteflies on the orange and aluminum mulches early in Fall 1989 delayed virus symptom development and increased yields. Virus symptom development was not delayed and yields were low on the yellow mulch, in spite of the low number of whiteflies. When averaged over all mulch colors, extra-large and marketable fruit yields increased linearly with delayed symptom development. It is proposed that, under high insect stress, mulches should be selected for their effects on insects in addition to their effects on soil temperature and plant morphology.

12/7/9 (Item 9 from file: 5)

DIALOG(R)File 5:BIOSIS Previews(R)

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09238858 BIOSIS NO.: 199497247228

Effects of mulching with *Azadirachta indica* and *Albizia lebbek* leaves on the yield of sorghum under semi-arid conditions in Burkina Faso.

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JOURNAL: Agroforestry Systems 24 (3):p277-293 1993

ISSN: 0167-4366

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English; French

ABSTRACT: From 1988 to 1990, leaves from *Azadirachta indica* and *Albizia lebbek* were used as mulch on sorghum (*Sorghum bicolor*) in semi-arid Burkina Faso. Five different application modes, each representing a different combination of application timing and mulch composition, were evaluated. In one of the modes leaves were combined with sorghum straw. Leaf quantities applied corresponded to dosages of 25, 50 and 75 kg N ha-1 in all five modes. Dosage had a significant influence on yield all three years. The mulching effect increased progressively over the years and was more pronounced the higher the dosage. Mean grain yields obtained with the highest dosage, relative to an unmulched control, were 203%, 364% and 422%, for the three years, respectively. Application timing had a significant influence on yields in 1988 and 1989, but the response was not consistent. Differences in response were attributed to variation in the rainfall distribution. Mulch composition did not have a significant influence on yield during any of the three years. Of the five modes evaluated, the ones producing the highest yields over the three-year

period of study were azadirachta leaves applied (i) at sowing and (ii) 4-6 weeks after sowing. Yields decreased on both the treated and untreated plots between 1988 and 1989. On the treated plots, yield generally increased again in 1990. This increase was attributed to a residual effect of the mulch. The residual effect probably only explained part of the large difference in yield between treated and untreated plots. It is therefore suggested that most of the nutrients released from the ****mulch**** were used by the ****plants**** during the ****same**** season, which increased production. Furthermore, the ****mulch**** layer could have reduced evaporation and thus increased the retention of soil water.

12/7/10 (Item 10 from file: 5)

DIALOG(R)File 5: BIOSIS Previews(R)
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08934527 BIOSIS NO.: 199396086028

Hazard for fall armyworm (Lepidoptera: Noctuidae) infestation of maize in double-cropping systems using sustainable agricultural practices.

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JOURNAL: Florida Entomologist 76 (2):p276-283 1993

ISSN: 0015-4040

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English; Spanish

ABSTRACT: Field tests demonstrated that selected sustainable agricultural practices influence intensity of fall armyworm (FAW), *Spodoptera frugiperda* (J. E. Smith), infestations of late planted maize, *Zea mays*, in double cropping systems. Reduced FAW infestations of seedling maize were associated with no-tillage as compared with plow-tillage practice. Maize in no-tillage plots required one less chlorpyrifos (0.56 kg AI/ha) spray than in plow-tillage based on a 50% action threshold. Surface debris of winter cover crops influenced lags of FAW infestation on no-tillage maize. Surface residues from previous cover crops may account for the reduced infestations in no-tillage areas. Infestations among plots became ****similar**** as ****plants**** grew from within the ****mulch**** cover. Use of poultry manure as a soil amendment had no effect on FAW damage, but a tendency for increased yields was observed in poultry manure plots. Chlorpyrifos significantly reduced FAW feeding resulting in increased whole plant dry weight yield in treated plots.

12/7/11 (Item 11 from file: 5)

DIALOG(R)File 5: BIOSIS Previews(R)
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08408976 BIOSIS NO.: 000094126630

EFFECTS OF FILM MULCH AND IMITATION CANOPY ON SOIL TEMPERATURE IN SAND DUNE FIELD

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JOURNAL: SAND DUNE RES 39 (1). 1992. 28-37. 1992

FULL JOURNAL NAME: Sand Dune Research

CODEN: SAKKD

RECORD TYPE: Abstract

LANGUAGE: JAPANESE

ABSTRACT: This study was conducted to investigate the soil temperature beneath film mulch in sand dune field micrometeorologically in relation to

a plant canopy. Black polyethylene film (0.03 mm thick) was used as the film mulch. A model made of cheese cloth served as the plant canopy. The model was controlled by a mesh of cheese cloth and a number of cheese cloth coverings. Horizontal distribution of soil heat fluxes were measured using 8 soil heat flow meters and the fluxes showed scattering. Scattering changed with time, being small at night and large during day time. Difference of daily maximum soil temperature at 10 cm depth between mulched plot and unmulched plot was positively correlated with daily amount of insolation. This tendency was not shown in the difference of daily minimum soil temperature. The effect of the plant canopy on soil temperature for both mulched plot and unmulched plot was large for early stage growth. The daily range of soil temperature was less for the mulched plot than the unmulched plot. Even when shielding by ****plant**** canopy was the ****same**** for ****mulched**** plot and unmulched plot, the effects of a meteorological factor on soil temperature and its intensity were differed.

12/7/12 (Item 12 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)
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08402773 BIOSIS NO.: 000094120427

POTATO TUBER PRODUCTION IN RESPONSE TO REFLECTED LIGHT FROM DIFFERENT COLORED MULCHES

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CENTER, FLORENCE, SC 29502-3039.
JOURNAL: CROP SCI 32 (4). 1992. 1021-1024. 1992
FULL JOURNAL NAME: Crop Science
CODEN: CRPSA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Colored mulches can affect the spectral balance (quality) and quantity of canopy light, which influences plant developmental patterns. Field studies were conducted to evaluate the influence of light reflected from different colored mulches on potato (*Solanum tuberosum* L.) tuber production. Potato plants ('Atlantic', 'Kennebec', 'Red Pontiac', and 'Superior') were grown in field plots covered with straw mulch that had been painted white, red, pale blue, or in alternating 5-cm stripes of blue and orange to provide a range of reflected light spectra. An unpainted straw mulch treatment and a no-mulch control were also used. Far-red to red (FR/R) ratio and percentage of photosynthetically active radiation (PAR) reflected from the different colored mulches relative to incoming sunlight ranged from 0.82 to 1.29 and from 12 to 46%, respectively. Plants receiving reflected light from the white, pale blue, and striped straw mulches produced > 15% more marketable tubers than the no-mulch control ****plants****. Red and unpainted straw ****mulches**** produced ****plants**** that had yields ****similar**** to the no-****mulch**** control. Similarities in yield and spectral pattern between the unpainted straw mulch and the no-mulch control indicated that yield increases associated with painted straw mulches were due to alteration in the quality and/or quantity of light reflected from them. It was concluded that potato tuber production can be influenced by colored straw mulches.

12/7/13 (Item 13 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)
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06747787 BIOSIS NO.: 000088057218

NO-TILL CORN PRODUCTION IN A LIVING MULCH SYSTEM

AUTHOR: ECHTENKAMP G W; MOOMAW R S
 AUTHOR ADDRESS: DEP. AGRON., UNIV. NEBR., NORTHEAST RES. EXT. CENT.,
 CONCORD, NEBR. 68728.
 JOURNAL: WEED TECHNOL 3 (2). 1989. 261-266. 1989
 FULL JOURNAL NAME: Weed Technology
 CODEN: WETEE
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: Combinations of grass and legume mulches were planted in growing corn during the fall in 1985 and 1986, and the following spring no-till corn was planted into these living mulches. Mulch treatments consisted of a single species or grass plus legume mixtures. Fluazifop-P, 2,4-D, and atrazine were broadcast applied in late April to suppress the mulches and reduce their competition with corn. Chewings fescue and ladino clover completed least with dryland corn. Weed growth associated with chewings fescue and the ladino clover ****mulches**** was ****similar**** to that in the conventional disk-****plant**** treatment, but corn yields were lower. Hairy vetch mulch was killed by 2,4-D. The winter rye mulch competed with corn and reduced yield.

12/7/14 (Item 14 from file: 5)
 DIALOG(R)File 5:Biosis Previews(R)
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06561187 BIOSIS NO.: 000087003348

FALL ARMYWORM LEPIDOPTERA NOCTUIDAE INFESTATIONS IN NO-TILLAGE CROPPING SYSTEMS

AUTHOR: ALL J N
 AUTHOR ADDRESS: DEP. ENTOMOL., UNIV. GA., ATHENS, GA. 30602, USA.
 JOURNAL: FLA ENTOMOL 71 (3). 1988. 268-272. 1988
 FULL JOURNAL NAME: Florida Entomologist
 CODEN: FETMA
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: Field experiments comparing no-tillage and plow-tillage practices demonstrated that infestations by the fall armyworm, *Spodoptera frugiperda* (J. E. Smith), ultimately become similar in either cropping system. However, in certain no-tillage situations where high mulch concentrations were present on the soil surface, oviposition and damage were reduced. Significantly fewer egg masses and damage were sampled on corn, *Zea mays* L., (3-leaf stage) while ****seedlings**** remained within no-tillage ****mulch****. Oviposition quickly became ****similar**** to that observed in plow-tillage systems when the plants grew above the mulch canopy of no-tillage. The number of egg masses on corn older than 4 leaves was similar in either cropping system, and leaf injury at plant silking was the same. In a comparison of corn, sorghum (*Sorghum bicolor* [L.] Moench.), and soybeans (*Glycine max* L.), the latter crop had no damage in either tillage system while corn and sorghum were heavily infested. Efficacy of chlorpyrifos (0.56 kg [AI]/ha) for controlling fall armyworm leaf damage was similar in corn and sorghum in either cropping system.

12/7/15 (Item 15 from file: 5)
 DIALOG(R)File 5:Biosis Previews(R)
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05666887 BIOSIS NO.: 000084015292

YIELD AND NODULATION OF PHASEOLUS-VULGARIS AND THE COMPETITIVITY OF AN INTRODUCED RHIZOBIUM STRAIN EFFECTS OF LIME MULCH AND REPEATED CROPPING

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 JOURNAL: SOIL BIOL BIOCHEM 19 (2). 1987. 171-178. 1987
 FULL JOURNAL NAME: Soil Biology and Biochemistry
 CODEN: SBIOA
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: Phaseolus vulgaris beans were planted in the field [Brazil] on an acid soil (pH 5.3) to investigate the effects of lime and mulch on nodulation and yield of the plants, and the competitiveness for nodule occupancy of an introduced strain of Rhizobium (R. leguminosarum biovar phaseoli). The plots were planted 5 times during a 2 yr period and at the first planting the seeds were inoculated with a peat based inoculum of strain C05. At subsequent plantings the seeds were inoculated with macerated nodules taken from ****plants**** from the previous crop from the ****same**** lime-****mulch**** treatment. At the final planting each plot was sub-divided and inoculated either with the original C05 strain, an acclimatized C05 strain (isolated from the 4th crop and identified as C05 using immunodiffusion), or with macerated nodules as before. Throughout the experiment there were no significant effects of any inoculum on nodulation or yield of the bean plants. This was probably due to the low competitiveness of the introduced strain which occupied at maximum 31% of the nodules in the unlimed plots and less than 19% in the limed plots. In general mulch had a negative effect on nodulation and yield although at the third crop (March 1983) when soil temperatures were high at the early stages of plant growth, mulch improved germination and the survival of the seedlings such that pod yield was more than 3 times greater than in unmulched plots. At the final crop C05 occupied at maximum only 24% of the nodules in the unlimed plots and a far lower proportion (0-2%) in the limed plots. The acclimatized strain showed a consistent tendency (statistically insignificant) to be more competitive for nodule sites than the original C05 strain.

12/7/16 (Item 16 from file: 5)
 DIALOG(R)File 5:Biosis Previews(R)
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05602379 BIOSIS NO.: 000083075519
ISOLATED PLOT TECHNIQUE FOR STUDYING SEEDLING GROWTH OF TURFGRASSES
 AUTHOR: BREDE A D
 AUTHOR ADDRESS: DEP. HORTIC. LANDSCAPE ARCHITECTURE, OKLAHOMA STATE UNIV.,
 STILLWATER, OKLA. 74078, USA.
 JOURNAL: AGRON J 79 (1). 1987. 5-8. 1987
 FULL JOURNAL NAME: Agronomy Journal
 CODEN: AGJOA
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: Field research with turfgrass seedlings is frequently complicated by weather disruptions and sampling error. A technique was developed for affixing turf seeds to a seedbed in the field for the purpose of monitoring field survival and growth of seedlings over time. Isolated plots of turfgrass seeds, 25 mm in diam and spaced 75 mm apart on a seedbed, were held in place with a liquid latex-based mulch and a non-woven fabric mulch. Seed displacement from rain-washing was held below 0.1% with this technique. The latex/fabric ****mulches**** had the ****same**** effect on ****seedling**** growth as do conventional ****mulches**** of straw or wood fiber; therefore, use of the latex/fabric mulches in this technique did not seem to constitute a serious deviation from standard planting practices. Results from field evaluations revealed that field

survival (percent germination) was accurately assessed using this technique without the added variance associated with subsampling of solid stands. Field survival of perennial ryegrass (*Lolium perenne* L.) seedlings sown at 59200 seeds m⁻² could be measured with 9% variability (CV), vs. 35 to 51% variability with traditional sampling-probe methods. Values of field survival obtained using isolated plots corresponded closely with values found in solid stands but with lesser variability. Plant growth parameters (leaves, shoots, roots) in isolated plots and solid stands diverged over time; interspecific competition occurred sooner in solid stands than in isolated plots. Care should be taken when extrapolating seedling growth results found using this technique to solid stand conditions since the seedlings are essentially space planted.

12/7/17 (Item 17 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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05242216 BIOSIS NO.: 000082082838

THE EFFECT OF SAWDUST MULCH AND INCREASING LEVELS OF NITROGEN ON THE WEED GROWTH AND YIELD OF FALSE HORN PLANTAINS MUSA

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JOURNAL: BIOL AGRIC HORTIC 3 (4). 1986. 353-360. 1986

FULL JOURNAL NAME: Biological Agriculture & Horticulture

CODEN: BIAHD

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: This investigations studied the effect of applying 100, 200 and 300 g N respectively per plant per year on the weed growth and yield of plantains mulched or unmulched with sawdust. Sawdust mulch effectively suppressed weed growth prior to canopy closure both for the plant and first ratoon crops. The plant crop of the mulched plantains was significantly superior in vegetative growth to the unmulched (irrespective of the fertilizer rate) and the control which received neither the mulch nor the fertilizer. Plantains which received the various quantities of fertilizer without ****mulch**** ****flowered**** about the ****same**** time and produced bunches of ****similar**** weights. Fertilizer application of 200-300 g N per plant to mulched plantains further accelerated leaf production, prolonged leaf longevity, stimulated rapid and early proliferation of suckers, matured significantly ($P = 0.05$) early and produced bunches 2-3 times heavier than that of the control. For the first ratoon crops, all the mulched plantains including mulch alone treatment flowered significantly earlier than others. The bunch weights from mulched plantains increased firstly over those of the plant crops and secondly, with increasing rates of fertilizer applied. Yield of the first ratoon crops from the unmulched plantains was lower than that of the plant crops, differed significantly from those of the control but remained similar only when 200 and 300 g N were applied.

12/7/18 (Item 18 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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04788671 BIOSIS NO.: 000080091799

SPRING WHEAT GROWTH AND NITROGEN-15 STUDIES UNDER ZERO AND SHALLOW TILLAGE ON THE CANADIAN PRAIRIE

AUTHOR: CARTER M R; RENNIE D A

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JOURNAL: SOIL TILLAGE RES 5 (3). 1985. 273-288. 1985

FULL JOURNAL NAME: Soil & Tillage Research
 CODEN: SOTRD
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: Zero-tillage (ZT) farming systems offer the potential of reducing soil erosion and conserving soil moisture on the semi-arid regions of the Canadian prairie. Since changes in soil tillage may alter the soil condition and environment, field experiments were conducted to assess the effect of ZT on spring wheat growth and 15N urea utilization and recovery. The study compared ZT and conventional shallow tillage (ST, 10 cm) systems, of 2-16-yr duration, situated on a range of Chernozemic soils. Generally, ZT produced similar grain and straw yields as the ST; incidences of reduced yield under ZT were associated with poor seedling establishment. Characteristic lower soil temperature (1-4.degree. C in seed row at 5-cm depth) under ZT was not related to crop yield, except for reduced early growth at one site. Soil moisture (to 120 cm) was similar between tillage systems, although moisture variations at the soil surface (0-5 cm), associated with differences in surface ****mulch****, were apparent. ****Plant**** uptake of P and K was ****similar**** between tillage systems. Differences in N concentration, plant uptake of soil and fertilizer N and indices of available soil N between tillage systems over the growing season, tended to be small and did not differ substantially, although site or location differences were evident. Overall N yield was mainly related to the ability of the plant to utilize N for growth and plant yield. Recovery of the fertilizer N in the soil-plant system was not related to differences in soil tillage.

12/7/19 (Item 19 from file: 5)
 DIALOG(R)File 5:Biosis Previews(R)
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02432096 BIOSIS NO.: 000066014639

EFFECTS OF SLITTED POLY ETHYLENE MULCHES ON SOIL TEMPERATURE AND YIELD OF SWEET CORN

AUTHOR: LEE S S; ESTES G O; WELLS O S
 AUTHOR ADDRESS: DEP. PLANT SCI., UNIV. N.H., DURHAM, N.H. 03824, USA.
 JOURNAL: CAN J PLANT SCI 58 (1). 1978 55-62. 1978
 FULL JOURNAL NAME: Canadian Journal of Plant Science
 CODEN: CPLSA
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: During 1974-1975, experiments using slitted polyethylene mulch were conducted with sweet corn [Zea mays] on a Charlton loam soil in Madbury, New Hampshire [USA]. Temperatures under slitted clear polyethylene mulch were higher than black mulch or bare soil during the early growing season; differences in soil temperature among mulch treatments decreased as the plant canopy increased. Early growth and subsequent maturity were promoted with clear, but not with slitted black, polyethylene mulch. Yield increased with slitted clear polyethylene mulch compared with black mulch or bare soil in 1974 due to an increase in number of ears per ****plant****; percent stand was ****similar**** among ****mulch**** treatments. In 1975, yield increased with slitted clear polyethylene mulch compared with black mulch or bare soil of the 2 May plantings due to increased percent stand; no differences in yield occurred among mulch treatments of the May 23rd planting when percent stand was similar. At maturity, total accumulation of N, P and K in the plants was higher under mulches compared to bare soil; no significant differences occurred between slitted black and clear polyethylene mulches.

12/7/20 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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07746867 Genuine Article#: 203PN Number of References: 19

Title: Mulching soil to increas yi ld and manage plant parasitic nematodes in cucumber (Cucumis sativus L.) fields: Influence of season and plastic thickness

Author(s): CoatesBeckford PL (REPRINT) ; Cohen JE; Ogle LR; Prendergast CH; Riley DM

Corporate Source: UNIV W INDIES,DEPT LIFE SCI, MONA CAMPUS/KINGSTON
7//JAMAICA/ (REPRINT)

Journal: NEMATROPICA, 1998, V28, N1 (JUN), P81-93

ISSN: 0099-5444 Publication date: 19980600

Publisher: ORGANIZATION TROP AMER NEMATOLOGISTS, AUBURN UNIV DEPT PLANT
PATHOLOGY, AUBURN, AL 36849

Language: English Document Type: ARTICLE

Abstract: Experiments were conducted to evaluate the effects of mulching soil with clear plastic at different periods of the year, and also of mulching with two thicknesses of plastic on cucumber growth, yield, foliar concentrations of total nitrogen or ammonium, phosphorus, and potassium, soil concentrations of total nitrogen or nitrate, phosphate, and potassium, and rhizosphere population densities of nematodes. Growth of plants in mulched plots often exceeded that in control plots. Yields fr-om plots mulched with 0.4-mm-thick plastic for five weeks, commencing December 1, 1995, and for six weeks, commencing March 18, July 3, and August 2, 1996, and planted immediately after mulching, were greater than those from nonmulched plots. Yields fi-om plots mulched for six weeks with 0.2-mm-thick plastic, commencing August 2, 1996, were not significantly different from control yields presumably because the plastic deteriorated within four weeks. *Rotylenchulus reniformis* and *Helicotylenchus erythrinae* were the most frequently detected phytoparasitic nematodes. At the end of the mulching period, population densities of parasitic and nonparasitic nematodes in plots mulched with the thicker plastic in March and October and with both thicknesses of plastic in August were lower than those in control plots. Foliar and soil concentrations of nutrients usually were ****similar**** for ****mulched**** and nonmulched plots. Increased growth and yield of cucumber ****plants**** in ****mulched**** soil were, thus, closely associated with the reduction in soil population densities of parasitic nematodes rather than with changes in soil fertility.

12/7/21 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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03732671 Genuine Article#: QC073 Number of References: 0

(NO REFS KEYED)

Title: MULCHING TO REGENERATE A HARSH SITE - EFFECT ON DOUGLAS-FIR SEEDLINGS, FORBS, GRASSES, AND FERNS

Author(s): MCDONALD PM; FIDDLER GO; HARRISON HR

Corporate Source: SILVICULTURE LAB,VEGETAT MANAGEMENT RES UNIT,2400
WASHINGTON AVE/REDDING//CA/96001

Journal: USDA FOREST SERVICE PACIFIC SOUTHWEST RESEARCH STATION RESEARCH
PAPER, 1994, N222 (SEP), PUR2-10

ISSN: 0363-5988

Language: ENGLISH Document Type: ARTICLE

Abstract: Douglas-fir seedlings on the Arcata District, Bureau of Land Management, U.S. Department of the Interior, in central coastal California, were planted in an effort to restore the natural forest to what was then pastureland. Douglas-fir seedlings were released from a

complex forb-grass-fern plant community by applying very large (10-ft square) and very small (2-foot square) durable mulches one month after planting. The large ****mulches**** were installed directly over the existing ****plant**** community, and the small ****mulches**** were applied over a ****similar****-sized scalp. Two-foot-square scalps and untreated control provided additional comparisons. After five growing seasons, stem diameter (measured at 12 inches above mean groundline) of Douglas-fir seedlings with large mulches was 1.61 inches, and of seedlings with small mulches was 1.36 inches. Only seedlings with large mulches were significantly larger than counterparts with small scalps (1.22 inches) or in the control (1.26 inches) after 5 years. In spite of high cost, the promising role of large mulches for establishing fast-growing Douglas-fir seedlings on a harsh site and the increased stability and sustainability that the future trees will bring to the more natural plant community give large mulches a place in the toolkit of ecosystem managers.

12/7/22 (Item 1 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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04232474 CAB Accession Number: 20023070600

Effect of organic mulch on seed and tuber yield of early season winged bean (*Psophocarpus tetragonolobus* (L.) DC) at Onne, Nigeria.

Ndegwe, N. A.

Rivers Institute of Agricultural Research and Training (RIART), Rivers State University of Science and Technology, Nkpolu-Oroworukwo, Port Harcourt, Nigeria.

African Journal of Agricultural Teacher Education vol. 9 (1/2): p.65-70

Publication Year: 2000

ISSN: 0794-7739 --

Language: English

Document Type: Journal article

Field experiments were conducted in Nigeria during the rainy season of 1991 on winged bean (*Psophocarpus tetragonolobus* cv. Tpt 26) to determine the effect of organic mulch on tuber yields. Tuber yields in staked and unstaked winged beans, with or without flowers were also studied. In staked beans with flowers, mulching decreased seed yield by 40% compared with those without mulch. Mulched and staked beans with ****flowers**** gave a high tuber yield obtained from ****similar**** ****plants**** without ****mulch****. In staked beans without ****flowers****, ****mulching**** had no beneficial effect on ****seed**** yield but slightly decreased tuber yield by 10% compared with those without mulch. In unstaked beans with flowers, the application of mulch increased both seed and tuber yields by 38.5 and 170.8%, respectively, compared with ****similar**** beans without ****mulch****. In unstaked beans without ****flowers****, ****mulching**** was not beneficial to ****seed**** yield but increased tuber yield by 35.6% compared with similar beans without mulch. 20 ref.

12/7/23 (Item 2 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

03763209 CAB Accession Number: 992301856

Effects of polythen film mulch on seed banks on arable land.

Sago, R.; Yoshimoto, R.; Takayanagi, S.; Matsuda, T.

Experimental Farm, School of Agriculture, Ibaraki University, 4668-01 Ami, Inashiki, Ibaraki 300-0331, Japan.

Journal of Weed Science and Technology vol. 44 (1): p.77-79

Publication Year: 1999 --

Language: Japanese

Document Type: Journal article

In plot trials in Japan in 1994-97 effects on weed populations and the soil seed bank following mulching with clear or black polythene, treating with 5 litres bialaphos (bilanafos)/ha or ploughing were investigated. The effect of herbicide on plant cover was more rapid than that of mulching but mulching with clear polythene had the same effect after 100 days as herbicide after 55 days. With ****mulching**** for 3 years the ****plant**** population was ****similar**** in the first 2 years then decreased markedly in the third year. Black polythene decreased the population in the first 2 years more than did clear polythene. Mulching for 2 years eliminated *Chenopodium album* and reduced *Cyperus microiria* and other weeds to low levels. Herbicide application was less effective and ploughing even less so. After 2 years the seed bank of *C. album* was 1186 seeds/m² with clear plastic mulch, 1136/m² with black plastic, 4057 with herbicide and 20 000 with ploughing; populations of *C. microiria* were 1010, 833, 2086 and 22 000/m², respectively, and those of other species 3660, 4086, 13 086 and 23 667/m². 7 ref.

12/7/24 (Item 3 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03752142 CAB Accession Number: 990307465

Weed infestation and yield of four vegetable crops in no-tillage cultivation using rye sown in the autumn as a cover crop.

Original Title: Zachwaszczenie oraz plonowanie czterech gatunkow warzyw uprawianych metoda bezorkowa z zastosowaniem zyta sianego jesienia jako rosliny okrywowej.

Borowy, A.; Jelonkiewicz, M.; Chmielowiec, P.

Katedry Warzywnictwa i Roslin Leczniczych, Akademia Rolnicza, Lublin, Poland.

Conference Title: Ekologiczne aspekty produkcji ogrodniczej, Poznan, Poland, 17-18 listopada 1998.

Roczniki Akademii Rolniczej w Poznaniu, Ogrodnictwo (No. 27): p.27-32

Publication Year: 1998

ISSN: 0137-1738

Editors: Fiedorow, Z. --

ISBN: 83-7160-147-6

Language: Polish Summary Language: english

Document Type: Conference paper; Journal article

Rye cv. Dankowskie was sown at a rate of 120 kg/ha in September 1995 at Lublin-Felin, Poland. In the early spring of the following year it was top-dressed with 50 kg N/ha. At the beginning of May, rye plants 50 cm high were sprayed with glyphosate at 1440 g/ha. After 2 weeks and complete desiccation of rye, beetroot cv. Chrobry and snap bean (*Phaseolus vulgaris*) cv. Bona were sown and plants of cabbage cv. Slawa z Enkhuizen and tomato cv. Rumba were planted directly in the field covered with rye ****mulch****. At the ****same**** time, the ****same**** ****vegetable**** ****plants**** were sown or planted on plots prepared traditionally with a rotary cultivator and treated with ammonium nitrate at 80 kg N/ha. Three weeks after planting cabbage and tomatoes in no-tillage and in traditional cultivation were top-dressed with ammonium nitrate at 40 kg N/ha. At the end of June, the effects of cultivation method on weed infestation and on the growth of vegetable plants were evaluated. Cabbage cultivated traditionally was harvested at the beginning of August and cabbage in no-tillage cultivation was harvested almost 1 month later because of slower plant growth in this treatment. Method of cultivation did not influence the date of harvest of other vegetables. On average, 1331 weeds belonging to 11 species grew on 1 m² of plot cultivated traditionally and the fresh weight of these weeds amounted to 465 g. In no-tillage cultivation, the number of weeds was reduced more than 3-fold, their

weight was reduced more than 4-fold and the composition of weed species was also changed. Method of cultivation did not affect emergence of plants and establishment of transplants but further growth was slower in no-tillage cultivation. Moreover, the yields of snap beans and tomatoes were 55% lower, yield of beetroots was 50% lower and yield of cabbage heads was 17% lower in no-tillage cultivation. However, their dry matter contents were 0.4-1.4% higher depending on species. 11 ref.

12/7/25 (Item 4 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

03736886 CAB Accession Number: 990307331

Application of 2078 has a detrimental effect on melon quality.

Original Title: L'applicazione del 2078 penalizza la qualita del melone.

Quattrucci, M.; D'Amico, A.

Arsia Regione Toscana, Italy.

Informatore Agrario vol. 55 (12): p.75-80

Publication Year: 1999

ISSN: 0020-0689 --

Language: Italian

Document Type: Journal article

The F1 hybrid melon cultivars Baggio, Century, Proteo and Marketstar were cultivated outdoors in Valdichiana Aretina, Arezzo, Italy using a low input system (following the norms stipulated in regulation Cee 2078/92) or a high input system. **Mulch** application and planting density (7520 **plants**/ha) were **similar** in both systems. The soil was tilled to 25-30 cm and 40-50 cm depth in the low and high input systems, respectively. The total volume of irrigation water applied over the season (May-August 1998) was 1580 m3/ha and 2000 m3/ha in the low and high input systems, respectively. Plants in the low input system were supplied with 100 kg N/ha, 150 kg P2O5/ha and 200 kg K2O/ha with 4 fertigation treatments, whereas plants in the high input system were supplied with 160 kg N/ha, 200 kg P2O5/ha and 300 kg K2O/ha with 5 fertigation treatments. Fungicide application was similar (5 sprays) but insecticide application was lower in the low input system (1 spray) than in the high input system (2 sprays). Marketable yields (on the basis of fruit weight) were higher in the high input system for cultivars Baggio and Century (575.99 and 547.52 q/ha, respectively, in the high input system, and 416.59 and 466.70 q/ha, respectively, in the low input system), but marketable yields were similar in cultivars Proteo and Marketstar in both systems (434.55-443.89 q/ha for Proteo and 435.62-438.94 q/ha for Marketstar). The cultivar x input interaction significantly affected fruit quality. Quality (deg Brix, pulp firmness) was lowest in Baggio fruits and highest in Proteo and Century fruits in both systems. The quality of Marketstar fruits was similar in both input systems but fruit quality was lower in the other cultivars in the low input system than in the high input system. Proteo was considered the most suitable cultivar for the low input system.

12/7/26 (Item 5 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

03719384 CAB Accession Number: 990306082

Influence of different mulch materials on flowering and fruit setting of winter tomato.

Ravinder Kumar; Srivastava, B. K.

Department of Horticulture, G. B. Pant University of Agriculture & Technology, Pantnagar-263 145 (U.P.), India.

Crop Research (Hisar) vol. 15 (2/3): p.196-198

Publication Year: 1998

ISSN: 0970-4884 --

Language: English

Document Type: Journal article

The influence of different mulch materials on flowering and fruit set in tomato cv. Pant Bahar was studied during the winter-spring season at HRC, G. B. Pant University of Agriculture and Technology, Pantnagar. Fruit set and harvest readiness were advanced by the ****mulching**** treatments. All the ****mulching**** materials gave ****similar**** results, producing significantly higher number of ****flowers**** per cluster and percentage fruit set as compared to controls. 6 ref.

12/7/27 (Item 6 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03675631 CAB Accession Number: 990701493

Effect of mulches and antitranspirants on yield attributes, yield and quality of safflower.

Patel, Z. G.; Patel, N. C.

Department of Agronomy, N. M. College of Agriculture, Navsari 396 450, Gujarat, India.

Gujarat Agricultural University Research Journal vol. 22 (2):

p.122-126

Publication Year: 1997

ISSN: 0250-5193 --

Language: English

Document Type: Journal article

In a field experiment in 1991/92 in Gujarat, safflower cv. Bhima was mulched with black polyethylene or rice straw or not mulched and treated with 10-4 phenyl mercuric acid (PMA), 8% kaolin, 200 ppm atrazine or various combinations of these antitranspirants. ****Mulching**** significantly increased ****seed**** yield. Both ****mulching**** treatments produced ****similar**** yields. ****Mulching**** with polyethylene + treatment with PMA + kaolin produced the highest seed yield of 2.08 t/ha. 7 ref.

12/7/28 (Item 7 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03661683 CAB Accession Number: 990300691

Soil mulching and irrigation in bell pepper growing.

Borasic, J.; Romic, D.; Tomic, F.; Zutic, I.; Klacic, Z.

Faculty of Agriculture, 10000 Zagreb, Croatia.

14th International congress on plastics in agriculture, Tel Aviv, Israel, March 1997.

Conference Title: 14th International congress on plastics in agriculture, Tel Aviv, Israel, March 1997.

p.411-420

Publication Year: 1998

Editors: Ben-Yehoshua, S.

Publisher: Laser Pages Publishing -- Jerusalem, Israel

ISBN: 965-90044-2-7

Language: English

Document Type: Conference paper

Trials were conducted in the Vrana valley of Croatia on bell pepper cv. Istra F1 using black polyethylene (PE) film, transparent photodegradable PE film and biodegradable paper with trickle or sprinkler irrigation. The mean decade soil temperatures at 10 cm depth in the month of May and June, were 1.5 to 3.5 deg C higher under the black film, and 1 to 2 deg C lower under the paper, in relation to soil temperatures without mulching.

Depending on the type of mulch and irrigation method, 8 weeks after planting, the height of plants was up to 91% higher in 1995, and up to 29% higher in 1996 than the height of ****plants**** cultivated without ****mulching**** but with sprinkler irrigation. In both years at the ****same**** time, fruit set per ****plant**** was least without ****mulching****, and with sprinkler irrigation. In comparison with the usual pepper cultivation method, the yield of marketable fruits grown under these other methods was higher by 14-89% in 1995, and by 30-99% in 1996. In the first 2 harvest weeks with PE-film mulching, yields were up to 128% in 1995, and up to 115% in 1996 year higher than for the whole harvest period under a conventional bell pepper growing system. 12 ref.

12/7/29 (Item 8 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03525895 CAB Accession Number: 981003503

Effects of Dazomet - Granular fumigant and Mulch for the production of 'Sunny' tomato.

Brown, J. E.; Motis, T. N.; Witt, J. B.; Channell-Butcher, C.; Tyson, T. W.; Sanders, L. S.

Department of Horticulture and Alabama Agricultural Experiment Station, Auburn University, AL 36849, USA.

Journal of Vegetable Crop Production vol. 3 (2): p.9-15

Publication Year: 1997 --

Language: English

Document Type: Journal article

Tomato plants (cv. Sunny) were grown using 4 fumigant treatments and 3 mulch treatments. The fumigants used were metham sodium at a rate of 935 litres/ha and dazomet at rates of 336 kg/ha, 420 kg/ha and 504 kg/ha. The mulches used were 1.25 mil black polyethylene (plastic), a spray-on styrene-butadiene polymer dispersion (Styrofan) sprayed over beds at a rate of 959 litres/ha, or none. ****Plants**** in all ****mulch**** treatments produced ****similar**** marketable yields. Neither fumigant had an advantage over the other with respect to yield. 10 ref.

12/7/30 (Item 9 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03325452 CAB Accession Number: 970701615

Effects of sowing date and growing methods on some characters of sweetcorn (Zea mays saccharata Sturt.).

Original Title: Seker misirin (Zea mays saccharata Sturt.) agronomik ozelliklerine ekim zamani ve yetistirme tekniklerinin etkisi.

Sencar, O.; Gokmen, S.; Idi, M.

Gazi Osmanpasa Universitesi, Ziraat Fakultesi Tarla Bitkileri Bolumu, Tokat, Turkey.

Turkish Journal of Agriculture & Forestry vol. 21 (1): p.65-71

Publication Year: 1997

ISSN: 1010-7649 --

Language: Turkish Summary Language: english

Document Type: Journal article

In field trials in 1993-94 in Tokat, Turkey, 2 sweetcorn hybrids were sown on 3 dates with conventional sowing, polyethylene mulch and transplanting. There were significant differences between hybrids for all characters except ear length, single ear weight and fresh ear yield per decare. With delay in sowing, tasselling and numbers of ears/decare decreased, while plant height, ear length and single ear weight increased. Traditional sowing and ****mulching**** had ****similar**** effects, while transplanting decreased tasselling, ****plant**** height, ear length and

single ear weight and increased number of ears/decare. 25 ref.

12/7/31 (Item 10 from fil : 50)

DIALOG(R)File 50:CAB Abstracts

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03292422 CAB Accession Number: 961006137

Strawberry cultivation. Total soil fumigation and fumigation in strips for growing Elsanta.

Original Title: Culture du fraisier. Desinfection totale du sol et desinfection par bandes pour la plantation d'Elsanta.

Meesters, P.; Meurrens, F.; Brugmans, W.

Exploitation Demonstrative, Projet IGRES-SANAFRU, Tongeren, Belgium.

Fruit Belge vol. 64 (460): p.65-69

Publication Year: 1996

ISSN: 0016-2248 --

Language: French

Document Type: Journal article

A comparison was made of 3 methods of controlling *Verticillium* spp. in outdoor strawberry cv. Elsanta grown under plastic mulch: total soil fumigation using dichloropropene (1,3-dichloropropene), Basamid (dazomet) or methyl bromide, strip fumigation under the plastic ****mulch****, using the ****same**** products, and spraying ****plants**** with Bavistin (carbendazim). Total fumigation with 1,3-dichloropropene gave the best disease control, followed by strip fumigation with methyl bromide. Carbendazim was ineffective. In a second field trial, the efficacy of strip fumigation with 1,3-dichloropropene was compared with that of different fungicides applied as sprays or drenches for control of *Phytophthora* spp. on Elsanta. Both strip fumigation and spray treatment with Ridomil Combi (metalaxyl + folpet) gave equally good results. Control of the diseases under practical conditions is discussed in the light of these results.

12/7/32 (Item 11 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03291716 CAB Accession Number: 960711341

Yield increase of spring wheat in mulched hole-sowing cultivation and the relevant agronomic management practices.

Xu ZhiBin; Shen QiangYun; Zhang NingWen; Wang ChengLian

Crop Institute of Ningxia Academy of Agricultural and Forestry Sciences, Yongning, Ningxia, China.

Ningxia Journal of Agricultural and Forestry Science and Technology (No. 6): p.1-4

Publication Year: 1995 --

Language: Chinese Summary Language: english

Document Type: Journal article

In a field experiment with spring wheat in 1995 in Yongning, Ningxia, the crop gave higher yield when sown in holes with plastic mulch compared with hole sowing and strip sowing without mulch (differences of 9.2 and 18.6%, respectively). The yield increase in the mulch treatment was attributed to earlier seedling emergence and longer growth duration favourable for organogenesis of the plants, earlier spike initiation and longer differentiation time, which resulted in larger spikes and more grains per spike, and prolonged grain-filling with more dry matter accumulation and hence, greater seed weight. Of the yield components, spike number per mu increased by 12 000 and 33 000 and grain number per spike by 1.9 and 1.1, respectively, as compared with hole sowing and strip sowing without ****mulch****. The 1000-****seed****-weight of the ****mulched**** treatment was ****similar**** to that of ****mulchless**** hole sowing and 2.3 g greater than that of strip sowing. (1 mu = 0.067 ha).

12/7/33 (Item 12 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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03160372 CAB Accession Number: 960700495

Plant and soil covers in direct seeded and transplanted sweet corn.

Felczynski, K.

Research Institute for Vegetable Crops, 96-100 Skierniewice, Poland.

Conference Title: Symposium on timing of field production of vegetables, Skierniewice, Poland, 23-27 August 1993.

Acta Horticulturae (No. 371): p.317-321

Publication Year: 1994

ISSN: 0567-7572

Editors: Babik, I.; Rumpel, J. --

Language: English

Document Type: Conference paper; Journal article

Field experiments between 1987 and 1989, with direct sown and transplanted sweetcorn, compared growth in the open field with a direct covering of perforated polyethylene film (PE), non-woven polypropylene (PP) and black or transparent, photo-degradable polyethylene film as a soil mulch. The harvest date was brought forward by 7-13 and 7-9 days for PE and PP respectively. Except for 1988, when there were high spring temperatures, both the covers increased the yield of direct sown sweetcorn. The earliness and yield of transplanted sweetcorn were only improved in 1987, when the air temperature was low. ****Mulching**** with clear polyethylene film gave ****similar**** results to covering the ****plants****, but the black ****mulch**** had no effect on earliness or yield. The use of transplants brought the harvest forward by 2-3 weeks and resulted in a slight improvement in yield. 4 ref.

12/7/34 (Item 13 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02904547 CAB Accession Number: 940308998

Preliminary trial of the performance of squashes (*Cucurbita pepo* L.), snap beans (*Phaseolus vulgaris* L.) and cucumbers (*Cucumis sativus* L.) with mulching and row covers.

Original Title: Ensayo preliminar del comportamiento de calabacita (*Cucurbita pepo* L.), frijol ejotero (*Phaseolus vulgaris* L.) y pepino (*Cucumis sativus* L.) en acolchados y microtuneles.

Contreras Magana, E.; Sanchez del Castillo, F.

Departamento de Fitotecnia, Universidad Autonoma Chapingo, Chapingo, Mexico.

Revista Chapingo vol. 15 (73-74): p.34-38

Publication Year: 1991, publ. 1992

ISSN: 0186-3231 --

Language: Spanish Summary Language: english

Document Type: Journal article

In the first trial, days to germination, frost damage, days to flowering, days to first harvest, duration of harvesting and total yields were compared in squash and snap bean ****plants**** mulched with a clear, white or black polyethylene ****mulch**** and control (non-****mulched****) ****plants****. Snap bean yields were ****similar**** in all treatments (1498-1694 g/plant) but squash yields were highest in plants mulched with clear polyethylene and lowest in control plants (14.3 and 6.6 kg/plant, respectively). In the second trial, squash, snap bean and cucumber plants were grown under various types of row cover but the results obtained were inconsistent as the trial was started late in the season. 7 ref.

12/7/35 (Item 14 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02867005 CAB Accession Number: 942401638

Ecological growing of leeks with plastics.

Benoit, F.; Ceustermans, N.

European R&D Centre, 2680 Sint-Katelijne-Waver, Belgium.

Plasticulture (No. 101): p.45-49

Publication Year: 1994 --

Language: English; French Summary Language: spanish; german

Document Type: Journal article

Mulching experiments were conducted using 3 treatments: A. uncovered soil with weed control using herbicides; B. black mulch (a black/white coextruded PE film), 80 mu thick, was laid mechanically with the black side uppermost and perforated by machine; C. mulching as B but with the white side uppermost. Anti-thrips gauze protection was applied to plots with 30 mu thick black PE mulch. The gauzes used were a non-woven polypropylene (10 g/m2) and UV stabilized net (144 g/m2, mesh 0.17 x 0.37 mm). Data indicated that only black mulch gave a significantly lower **plant** weight with thinner white shafts. White **mulch** gave **similar** yields to uncovered plots. Effective thrips control was achieved with PE anti-thrips net. Non-woven polypropylene had some protective effect but was susceptible to perforation by the leek leaves.
10 ref.

12/7/36 (Item 15 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02689437 CAB Accession Number: 930320984

Comparison of winter mulches on several strawberry cultivars.

Abbott, J. D.; Gough, R. E.

Department of Plant Sciences, University of Rhode Island, Kingston, RI 02881, USA.

Journal of Small Fruit & Viticulture vol. 1 (1): p.51-58

Publication Year: 1992 --

Language: English

Document Type: Journal article

Various winter mulching materials (polyethylene, polyester or oats) were investigated as alternatives to oat straw mulching in strawberries during 2 winter seasons of 1983-85. Newly established strawberry plants of the cultivars Holiday, Honoeoye, Canoga, Apollo, Scott, Garnet, Surecrop and Guardian were either mulched with oat straw (control) or an oat crop or covered with polyethylene or with spun-bonded polyester row covers. The oat crop was sown in Aug. within the strawberry crop and was killed by frost. The spun-bonded polyester covers were applied to beds previously covered with straw. The mulches/row covers were removed either early (10 Apr.) or late (10 Mar.). Plants flowered and fruited earlier than control plants when polyethylene film was used as a row cover. The date of removing the mulching material had an effect on the flowering date. Yield and fruit size were reduced when polyethylene film row covers were retained until late in the flowering season. Fruit size and yield of plants covered with spunbonded-polyester row covers were generally similar to those mulched with oat straw to a depth of 6-10 cm. Covering with polyester row covers until late May resulted in earlier flowering than covering until Apr., however, fruit yield and size were slightly reduced. **Plants** **mulched** with the oat crop produced **similar** or greater yields and size fruits than **plants** **mulched** with straw. The date of removing mulch did not affect flowering date, fruit yield or size. Leaf scorch, reduction in fruit size and number, and high incidence of leaf

diseases were the disadvantages associated with late removal of polyethylene mulch. There were significant differences for yield and fruit size among cultivars, however cultivar x mulching/row cover treatment interactions were significant for these attributes. 14 ref.

12/7/37 (Item 16 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02450402 CAB Accession Number: 912310191

The effect of soil temperature, moisture and nitrogen on *Striga asiatica* (L.) Kuntze seed germination, viability and emergence on sorghum (*Sorghum bicolor* L. Moench) roots under field conditions.

Osman, M. A.; Raju, P. S.; Peacock, J. M.

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Andhra Pradesh 502 324, India.

Plant and Soil vol. 131 (2): p.265-273

Publication Year: 1991

ISSN: 0032-079X --

Language: English

Document Type: Journal article

Striga seeds contained in nylon bags and buried at 2 cm in the soil, were exposed to different temp. and moisture treatments. Clear polythene, hay mulch and bare soil treatments were used to vary soil temp. giving mean max. temp. of 60 deg, 48 deg and 37 deg C, resp. Irrigation levels of 0, 30 and 60 mm were applied to change soil moisture. After 34 d of preconditioning, the exhumed *Striga* seeds from polythene-covered plots (solarized plots) did not germinate or retain viability when these seeds were exposed to sorghum root exudate. However, **seeds** similarly buried under hay **mulch** or bare soil had **similar** germination and viability rates. Of these, 75% germinated and 85% were viable, regardless of the temp. treatment. Although seeds stored at high temp. and humidity (solarization) were killed, more *Striga* plants emerged under the polythene treatment compared to hay mulch and bare soil treatments. The observed *Striga* plants in the polythene mulch treatment were, therefore, assumed to have come from deeper layers where solarization was not effective. Irrigation treatments did not have significant effects on *Striga* seed germination and viability, but a slightly higher number of plants emerged at 60 mm irrigation level than at 30 mm and 0 mm. *Striga* emergence, on the other hand, was directly related to the rate of N application. Nitrogen rates of 0, 25, 50 and 100 kg/ha resulted in the emergence of 11, 34, 38 and 40 *Striga* plants/plot, resp. Despite the high infestation at high N levels, sorghum plants did not show a loss of vigour. 27 ref.

12/7/38 (Item 17 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02377972 CAB Accession Number: 910303469

Composted sewage sludge: an aid in propagation.

Gouin, F. R.

Department of Horticulture, University of Maryland, College Park, MD 20742-5611, USA.

Combined Proceedings - International Plant Propagators' Society vol. 39 p.489-493

Publication Year: 1989, publ. 1990

ISSN: 0538-9143 --

Language: English

Document Type: Conference paper; Journal article

The process of composting sewage sludge is outlined and advice is given on its storage, quality and uses in seedling production and rooting of

cuttings. In trials, compost composed of woodchips and sewage sludge was applied at 112 (dry) t/ha as a soil amendment in seedbeds (with no fertilizer) before autumn sowing of deciduous trees and shrubs. Seedling height was increased in *Cornus florida*, *Liriodendron tulipifera*, *Juglans nigra*, *Quercus rubra*, *Robinia pseudoacacia* and *Elaeagnus umbellata*, compared with seedlings raised in soil alone, with or without fertilizers. In the production of *C. florida* seedlings from freshly harvested, uncleaned seeds, more seedlings were harvested from compost-amended soil than from soils without compost. Seedlings of *L. tulipifera* grown in compost-amended soils suffered little or no winter injury, whereas with seedlings grown in soils without compost, 50% or more of the top growth died back. However, applications at levels exceeding 112 t/ha generally reduced seedling populations without any substantial increase in top growth. When composted sludge was applied in autumn as an amendment at 112 t/ha to seedbeds for *Pinus strobus* and *Picea abies*, the ****seedling**** population was reduced. However, applying the ****same**** amount of compost as a winter ****mulch**** for ****seedlings**** resulted in an increase in top growth ****similar**** to that obtained with a combined ****mulch**** of fertilizer and milled pine bark. 6 ref.

12/7/39 (Item 18 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02340531 CAB Accession Number: 902303285

Effect of oil spraying and vinyl mulching for the control of virus disease on red pepper.

Kim, J. S.; Lee, J. S.; Lee, S. H.; Lee, M. W.

Agricultural Sciences Institute, Rural Development Administration, Suwon, Korea Republic.

Research Reports of the Rural Development Administration, Crop Protection vol. 31 (4): p.7-12

Publication Year: 1989

ISSN: 1013-9389 --

Language: English Summary Language: korean

Document Type: Journal article

Virus diseases spread more slowly in the early and mid-growing season in *Capsicum* plots mulched with silver striped black vinyl. Incidence reached 100% later in the season. Tobacco mosaic tobamovirus was isolated from 66.3% of the infected plants and cucumber mosaic cucumovirus from 9.1%, with mixed infections in 10.3%. Aphid populations showed 3 peaks under all treatments but numbers were least in the plots with black vinyl. Yields from these plots averaged 37 900 g compared with 19 600 g from non-****mulched**** plots. ****Plant**** heights were ****similar**** under both conditions. In plots ****mulched**** with transparent vinyl yield was only 27 000 g despite the fact that the plants were taller than those grown with the black mulch. 12 ref.

12/7/40 (Item 19 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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02315877 CAB Accession Number: 900397832

Effects of injected and surface fertility on Hibiscus growth in bare ground, mulch and turf.

Gilman, E. F.

Department of Ornamental Horticulture, University of Florida Institute of Food and Agricultural Sciences, Gainesville, FL 32611, USA.

Proceedings of the Florida State Horticultural Society vol. 102 p.144-145

Publication Year: 1989

ISSN: 0886-7283 --

Language: English

Document Type: Conference paper; Journal article

In an experiment in 1982-83 on a Boca fine sand at Boynton Beach, Florida, Hibiscus rosa-sinensis plants were planted 8 ft apart in June 1982 and plots were then turfed with Stenotaphrum secundatum cv. Floratam, mulched with a 3-inch layer of cypress mulch or treated with glyphosate to maintain bare soil. Plots were given 1 lb N + 0.5 lb K + 0.01 lb Mn + 0.03 lb Fe/1000 ft² by surface application or subsurface injection or not given fertilizer. By the winter of 1983, after 4 fertilizer applications, Hibiscus stem diameter, leaf colour, ****plant**** quality and shoot growth in the bare ground were ****similar**** to those in the ****mulched**** plots. Hibiscus growth and ****plant**** quality ratings in both treatments were better than in the turfed plots. There were no significant growth, colour or quality differences between plants receiving injected or surface-applied fertilizer. Maintaining the area around Hibiscus in mulch or bare ground, even without fertilizer, promoted better Hibiscus growth than keeping the turf and applying fertilizer. Hibiscus did not respond to fertilizer applied during the first 16 months following planting. 7 ref.

12/7/41 (Item 20 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

02293070 CAB Accession Number: 900737170

Modification of micro-environment with live mulch for optimizing seedling emergence and yield of soyabean.

Sarbjeet Singh; Kler, D. S.

Department of Agronomy, Punjab Agricultural University, Ludhiana 141004, India.

Environment and Ecology vol. 8 (2): p.721-724

Publication Year: 1990

ISSN: 0970-0420 --

Language: English

Document Type: Journal article

In field trials at Ludhiana, during the monsoon seasons of 1987-89, the effects of live mulches (cowpeas, maize + cowpeas or Sesbania aculeata) were compared with conventional straw mulch and sowing seeds soaked in water for 12 h into bare plots. Live mulches intercepted 70.3-88.1% solar radiation and lowered soil temp. slightly, compared with a straw ****mulch****. Soyabean ****seed**** and straw yields with live ****mulches**** were ****similar**** to those with straw ****mulch**** but live ****mulches**** provided 21.5-22.0 t green fodder/ha during a period of scarcity. 7 ref.

12/7/42 (Item 21 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

02095286 CAB Accession Number: 890355083

Influence of plastic mulch and type and frequency of irrigation on growth and yield of bell pepper.

VanDerwerken, J. E.; Wilcox-Lee, D.

Department of Vegetable Crops, Long Island Horticultural Research Laboratory, Cornell University, Riverhead, NY 11901, USA.

HortScience vol. 23 (6,I): p.985-988

Publication Year: 1988

ISSN: 0018-5345 --

Language: English

Document Type: Journal article

A field study was designed to evaluate the effects of various irrigation methods, raised beds, and plastic mulch on yield and fruit quality of the

capsicum cv. California Wonder. Irrigation was scheduled on the basis of soil matric potential and monitored by Hg manometer tensiometers and soil moisture blocks. Trickle-irrigated plots were watered at soil matric potentials of -0.025 and -0.075 MPa, and sprinkled plots at -0.075 MPa. The combination of black polyethylene mulch and irrigation produced maximum yields, but frequency of irrigation had little effect on yield when the plants were mulched. High frequency (15 applications) and low frequency (5 applications) of trickle irrigation resulted in ****similar**** yields when the ****plants**** were ****mulched****. The use of ****mulch**** without irrigation had a markedly beneficial effect on yield; yields from plots that were mulched but not irrigated were similar to those from plots that were sprinkler-irrigated but not mulched. The percentage of marketable fruits was substantially reduced in the absence of both irrigation and mulch, because of the high incidence (24.8%) of both solar injury and blossom-end rot. 12 ref.

12/7/43 (Item 22 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

02012885 CAB Accession Number: 880715507

The use of Mucuna in upland farming systems for improving soil productivity.

Suwardjo, H.; Sukmana, S.

Cent. Soil Res., Bogor, Indonesia.

Food legume improvement for Asian farming systems

p.245

Publication Year: 1987

ACIAR Proceedings No. 18

Editors: Wallis, E.S.; Blyth, D.E.

Publisher: Australian Centre for International Agricultural Research

-- Canberra, Australia

Language: English

Document Type: Conference paper; Abstract only

Soyabeans followed by maize were grown following Mucuna sp. (Mucuna capitata?), groundnuts or grass at a site in Jambi province. Soyabean seed yields of 1.26 and 1.15 t/ha were obtained after incorporation of Mucuna residues and removal of Mucuna residues before sowing, resp., compared with 0.76 and 0.56 t/ha after groundnuts and grass, resp. The following maize crop also gave highest grain yields (2.25 t/ha) from plots where Mucuna residues were incorporated. Soyabean seed yields of 0.69 t/ha from tilled, unfertilized plots with Mucuna residues removed were increased to 1.0 t/ha on tilled, fertilized plots with Mucuna incorporation and to 1.1 t/ha on untilled, fertilized plots with Mucuna ****mulch****. ****Similar**** results were obtained for maize with corresponding ****seed**** yield of 0.54, 1.81 and 2.21 t/ha. 2 ref.

12/7/44 (Item 23 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01980155 CAB Accession Number: 880713190

Rice seedling establishment for machine transplanting. VI. Effect of mulching materials on raising rice seedling on trays for machine transplanting.

Yun, Y. D.; Yang, W. H.; Kwak, Y. H.; Park, S. H.; Park, R. K.

Crop Exp. Sta., RDA, Suwon 170, Korea Republic.

Korean Journal of Crop Science vol. 31 (1): p.9-15

Publication Year: 1986

ISSN: 0252-9777 --

Language: Korean Summary Language: english

Document Type: Journal article

Light control using 3 covering materials was examined at the greening stage after seedling emergence in the rice cv. Nampungbyeo, Taebaegbyeo, Seonambyeo and Seomjinbyeo sown on 15 Apr. and 10 May in 1983 and 1984, resp. After seedling emergence the seedling boxes were moved to tunnels covered with polyethylene film, silverpoly sheet or spunbonded polyester fabric and ****mulched**** with the ****same**** materials. For machine transplanting of rice ****seedlings**** for early season and optimum season crops, polyethylene film tunnels with silverpoly or spunbonded polyester fabric mulch reduced non-parasitic seedling damping-off and albinism, protected rice seedlings from injuries due to extremely low nocturnal temp., and reduced the differences in diurnal temp. With late season crops in a double cropping system a silverpoly or spunbonded polyester fabric tunnel produced vigorous seedlings and prevented extreme rises of diurnal temp. 11 ref.

12/7/45 (Item 24 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01967189 CAB Accession Number: 880711603

Studies on the early harvesting cultivation with vinyl mulching of sweet potato.

Jeong, B. C.; Oh, S. K.; Park, K. Y.; Rho, S. P.; Roh, T. H.; Chae, J. C.

Mokpo Sub-Sta., Crops Exp. Sta., Muan, Korea Republic.

Research Reports of the Rural Development Administration, Crops, Korea Republic vol. 28 (2): p.189-196

Publication Year: 1986 --

Language: Korean Summary Language: english

Document Type: Journal article

Sweet potato cv. Kongmi and Suweon 147 tubers were planted 15 cm apart in furrows 0, 6, 8 or 10 cm deep on ridges 25 cm high and covered with vinyl ****mulches**** or on ****similar**** ridges without furrows or ****mulches****. Av. number of large tubers/****plant**** and av. wt of large tubers was higher in cv. Hongmi than in Suweon 117. Highest tuber yield was obtained from planting on 10 Apr. into mulched furrows 6 cm deep and harvesting on 10 Aug., but economic returns were highest with harvesting on 30 July and with cv. Hongmi. 10 ref.

12/7/46 (Item 25 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01931893 CAB Accession Number: 880349041

Yield and content in nitrates, minerals and ascorbic acid of leeks and turnips grown under mineral or organic nitrogen fertilizations.

Termine, E.; Lairon, D.; Taupier-Letage, B.; Gautier, S.; Lafont, R.; Lafont, H.

Unite 130 de l'Institut National de la Sante et de la Recherche Medicale, 13009 Marseilles, France.

Plant Foods for Human Nutrition vol. 37 (4): p.321-332

Publication Year: 1987

ISSN: 0921-9668 --

Language: English

Document Type: Journal article

Mineral NPK fertilizers and organic fertilizers (blood meal, sheep manure compost and wood chip compost) were applied to leeks (cv. Monstrueux d'Elboeuf) and turnips (cv. Blanc dur d'hiver) grown successively in 200-litre containers. Leeks were planted on 22 April and harvested on 29 June, and turnips were sown on 6 September and harvested

on 20 December. Sheep manure and wood chip composts were only applied the day before planting the leek seedlings and were not reapplied before sowing the turnip seeds; blood meal and mineral fertilizers were applied in split doses throughout both crop periods. Additional phosphorus (P205) was added to containers with manure compost and blood meal before sowing the turnips to avoid a lack of available phosphorus. Mineral fertilizers, manure compost and blood meal gave ****similar**** ****vegetable**** yields; fertilizer-free controls and ****wood**** ****chip**** compost (in the case of turnips) gave the lowest yields. Dry matter, ascorbic acid and mineral contents were not strongly affected by the different fertilization regimes. Crop nitrate content was significantly lower with manure or wood chip compost application than with blood meal or mineral fertilizer application; the lowest nitrate contents were observed in the untreated controls. The results indicate that vegetable nitrate accumulation is dependent on the type of fertilizer used, those fertilizers with readily available nitrogen (such as mineral fertilizers and blood meal) giving the highest rates of accumulation. 41 ref.

12/7/47 (Item 26 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01891200 CAB Accession Number: 871914683

Yield and nodulation of Phaseolus vulgaris and the competitiveness of an introduced Rhizobium strain: effects of lime, mulch and repeated cropping.

Lucrecia, M.; Ramos, G.; Boddey, R. M.

EMBRAPA-Programa Nacional Pesquisa Biol. Solo, Km 47, Seropedica, 23851, Rio de Janeiro, Brazil.

Soil Biology & Biochemistry vol. 19 (2): p.171-177

Publication Year: 1987

ISSN: 0038-0717

6 fig., 4 tab. --

Language: English

Document Type: Journal article

Phaseolus vulgaris beans were planted in the field on an acid soil (pH 5.3) to investigate the effects of lime and mulch on nodulation and yield of the plants, and on the competitiveness for nodule occupancy of an introduced strain of *Rhizobium* (*R. leguminosarum* biovar *phaseoli*). The plots were planted 5 times during a 2 yr period and at the first planting the seeds were inoculated with a peat-based inoculum of strain C05. At subsequent plantings the seeds were inoculated with macerated nodules taken from ****plants**** from the previous crop from the ****same**** lime-****mulch**** treatment. At the final planting each plot was sub-divided and inoculated with the original C05 strain, with an acclimatized C05 strain (isolated from the 4th crop and identified as C05 using immunodiffusion) or with macerated nodules as before. Throughout the experiment there were no significant effects of any inoculum on nodulation or yield of the bean plants. This was probably due to the low competitiveness of the introduced strain which occupied a maximum of 31% of the nodules in the unlimed plots and less than 19% in the limed plots. In general mulch had a negative effect on nodulation and yield, although at the third crop, when soil temperatures were high in the early stages of plant growth, mulch improved germination and seedling survival such that pod yield was more than 3 times greater than in unmulched plots. At the final crop C05 occupied a maximum of only 24% of the nodules in the unlimed plots and a far lower proportion (0-2%) in the limed plots. The acclimatized strain showed a consistent but statistically insignificant tendency to be more competitive for nodule sites than the original C05 strain. 35 ref.

12/7/48 (Item 27 from fil : 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01737887 CAB Accession Number: 861904127

Spring wheat growth and 15N studies under zero and shallow tillage on the Canadian prairie.

Carter, M. R.; Rennie, D. A.

Department of Soil Science, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0, Canada.

Soil & Tillage Research vol. 5 (3): p.273-288

Publication Year: 1985

ISSN: 0167-1987

11 tab. --

Language: English

Document Type: Journal article

In field experiments on a range of Chernozemic soils in the great plains region of western Canada, zero tillage (ZT) and conventional shallow tillage (ST, 10 cm) systems, of 2-16-year duration, were compared with respect to their effect on the growth and N uptake of wheat. Generally, ZT and ST produced similar grain and straw yields; incidences of reduced yield under ZT were associated with poor seedling establishment. Characteristic lower soil temperature (1-4 deg C in the seed row at 5-cm depth) under ZT was not related to crop yield, except for reduced early growth at one site. Soil moisture (to 120 cm) was similar in the two tillage systems, although moisture variations at the soil surface (0-5 cm), associated with differences in surface ****mulch****, were apparent. ****Plant**** uptake of P and K was ****similar**** in the two tillage systems. Differences in N concentration, plant uptake of soil and fertilizer N and indices of available soil N between tillage systems over the growing season tended to be small. Recovery of fertilizer N in the soil-plant system was not related to differences in soil tillage. 29 ref.

12/7/49 (Item 28 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01638585 CAB Accession Number: 850778061

A study on the effect of plastic film mulching on cotton seedlings.

China, Cotton Research Institute, Shanxi Academy of Agricultural Sciences

Cotton Res. Inst., Shanxi Acad. of Agric. Sci., Yuncheng, Shanxi, China.

Shanxi Agricultural Science (Shanxi Nongye Kexue) (No.1): p.14-16

Publication Year: 1984 --

Language: Chinese

Document Type: Journal article

Experiments were carried out on sandy soil in Yuncheng and Yongji Counties, resp., on the relationship between different soil moisture contents and plant stands and between different mulching techniques and emergence. With mulching when soil moisture content was >10.9% and without mulching when soil moisture content was around 14.4%, sown cotton seeds continued to absorb water and germinated; below these levels, seed moisture content decreased. At 14.4% moisture, the moisture absorbing rate of seeds with mulch was 56.2% faster than without mulch. When soil moisture content was 9-17%, seed emergence rate increased with increase in soil moisture content. Generally, seed emergence rate increased 8.64% for every 1% increase of soil moisture content. In soil with 11-16% moisture content seed emergence rate increased with the increase in moisture absorbing capacity of seeds. However, when moisture absorbing capacity exceeded 80%, ****seed**** emergence rate decreased to 70%. At the ****same**** level of moisture absorbing capacity, ****seed**** emergence rate with ****mulch**** was higher than that without. Among the 3 mulching patterns, ditch-mulching resulted in fastest germination and highest emergence rate, followed by flat (level)-mulching and ridge-mulching. The temp. with

ridge-mulching was higher than with flat- or ditch-mulching, so the proportion of sun-scorched seedlings was also higher.

12/7/50 (Item 29 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01544220 CAB Accession Number: 842422786

Effect of mulching on yield and some economic characteristics of maize grown on slopes.

Stoichev, T.

Op. stantsiya po borba c eroziyata, Ruse, Bulgaria.

Rasteniye"dni Nauki vol. 21 (4): p.39-44

Publication Year: 1984

3 tab. --

Language: Bulgarian Summary Language: english; russian

Document Type: Journal article

Three basic soil cultivation methods, 3 fertilizer application rates and 2 methods of mulching were compared. Mulching as an independent treatment had no effect on the quantity of available soil moisture and therefore did not increase yields. Fertilizer application showed reduced or the ****same**** effectiveness when combined with ****mulching****. ****Mulching**** reduced soil losses since ****plant**** residues significantly lowered the destructive energy of rain drops. 15 ref.

12/7/51 (Item 30 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01308698 CAB Accession Number: 830748479

Metribuzin activity as related to soil moisture in conservation tillage.

Parrish, S. K.; Morrow, L. A.; Gealy, D. R.

Washington State Univ., Pullman, WA 99163, USA.

Conference Title: Abstracts, 1983 Meeting of the Weed Science Society of America.

p.89-90

Publication Year: 1983 --

Language: English

Document Type: Conference paper

Spring wheat injury in the field was greater where 0.56 kg metribuzin/ha was applied pre-em. in a high-surface residue, no-till system than with conventional clean tillage. Wheat yield in the treated areas increased 35% and decreased 80% with conventional and no-till, resp. Crop injury was correlated with an increase in surface soil moisture associated with high amounts of surface crop residues. Metribuzin resulted in similar wheat injury in greenhouse pot studies when inorganic mulches were used to simulate crop residues. A followup study was conducted to determine metribuzin behaviour in soil as influenced by mulch treatment. Spring wheat was sown at a depth of 6 cm in pots which were treated with surface-applied metribuzin and then covered with a perlite mulch or left bare. A thin layer of activated carbon was placed 1, 3, 5, 7 or 9 cm deep in the soil to restrict metribuzin movement to certain zones. All pots received the ****same**** amount of water. ****Plants**** in the ****mulched**** pots were 36% larger than in the unmulched pots when the C layer was placed above the seed. The mulched plants were 70% smaller if the C layer was below the seed, indicating that most metribuzin absorption by the plant occurred below sowing depth and that increased soil moisture increased metribuzin conc. at these lower depths. With no C layer, 80% more metribuzin leached to 5 cm in mulched than in unmulched treatments. Leachate from mulched soil columns treated with metribuzin showed traces of chemical 7-10 days earlier than in the unmulched columns. Increased

crop injury was correlated with crop residue, soil moisture and metribuzin movement in the soil.

12/7/52 (Item 31 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

01269402 CAB Accession Number: 830313831

The effects of mulches and antitranspirants on winter injury of evergreens.

Gibbons, F. D., III

Kansas State University, Manhattan, Kansas, USA.

American Nurseryman vol. 157 (4): p.47-55

Publication Year: 1983

ISSN: 0003-0198

17 pl. --

Language: English

Document Type: Journal article

Container-grown *Pinus nigra*, *P. strobus*, *P. sylvestris*, *Taxus X media* and *Juniperus horizontalis*, cv. *Wiltonii*, were sprayed to runoff with Wilt-Pruf, Exhalt 4-10 or Vapor Gard on 10 November, and then either (a) stored on the ground with their containers submerged in a trench of maize cobs, (b) stood upright in waterproofed containers submerged in water, (c) positioned at 45 deg and covered with Microfoam, or (d) stood upright and covered with straw. Control plants were sprayed or not sprayed and stood upright on the ground unprotected. Plants from treatments (a) and (b) had the highest root zone temperatures, followed by plants from treatment (c), but winter injury was lowest in plants from treatments (c) and (d) in which entire plants were mulched, compared with (a) and (b) in which only root zones were ****mulched****. Winter injury was ****similar**** in ****plants**** from treatments (a) and (b) and in unmulched controls. Shoot growth was a better indicator than budbreak for evaluating the effects of mulching on winter injury. Winter injury was not affected by Exhalt 4-10 but was slightly increased by Wilt-Pruf and Vapor Gard, which contain Pinolene. Electron micrographs of antitranspirant films on *P. nigra* needles are included. *P. strobus* and *T. X media* were the most sensitive to winter injury and antitranspirant effects, and *J. horizontalis* was the least susceptible. 10 ref.

12/7/53 (Item 32 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

00865573 CAB Accession Number: 790656126

Effect of bark or sawdust mulch or growing medium (on) greenhouse CO2 content.

Original Title: 108).

Cotter, D. J.; Montano, J.; Fisher, J. T.

New Mexico St. Univ., Las Cruces, N. Mex., USA.

Conference Title: Program and abstracts.

HortScience vol. 14 (3): p.409

Publication Year: 1979

ISSN: 0018-5345 --

Language: English

Document Type: Abstract only

Concentrations of CO2 in greenhouses with a continuous deep growing medium or mulched with bark or sawdust were double ambient concentrations. In a separate experiment, the height of white fir (*Abies concolor*) ****seedlings**** was increased by 22% by the ****same**** treatment. Gravel ****mulches**** had no effect on CO2 concentrations or growth.

12/7/54 (Item 33 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

00720626 CAB Accession Number: 790378670

Weed control for veg tables grown on clear plastic mulches.

Gorske, S. F.

Rutgers Research and Development Center, Bridgeton, New Jersey 08302, USA.

Conference Title: Proceedings, Northeastern Weed Science Society.

(Vol.33): p.161-165

Publication Year: 1979 --

Language: English

Document Type: Miscellaneous

Trials were carried out on a sandy loam soil with eggplant, sown cucumber and transplanted muskmelons grown on a clear plastic mulch or on bare soil using trickle irrigation. Weed control was generally better under the clear plastic mulch than on the bare soil. Some evidence indicates that weed control was enhanced under the clear plastic mulch due to higher soil temperatures. The phytotoxicity to the crop ****plant**** was the ****same**** whether grown under the ****mulch**** or on bare soil. Oryzalin at 0.75 lb/acre pre-emergence was best in eggplant, bensulide at 4 lb + naptalam at 2 lb/acre pre-emergence in cucumber and ethalfluralin at 1.12 lb/acre pre-emergence in muskmelon. 1 ref.

12/7/55 (Item 34 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

00719794 CAB Accession Number: 790373196

Aluminium foil for the control of watermelon mosaic in vegetable marrow.

Eulitz, E. G.

Horticultural Research Institute, Pretoria, South Africa.

Phytophylactica vol. 9 (1): p.23

Publication Year: 1977

ISSN: 0370-1263 --

Language: English

Document Type: Journal article

Seeds of marrow, cv. Long Green Bush, were sown in January either under a mulch of aluminium foil strips (in 12-cm. diameter holes 0.75 m apart) or in the open ground at the ****same**** spacing. The foil-****mulched**** ****plants**** grew vigorously and were free of watermelon mosaic symptoms when they started flowering, 34 days after sowing. At this stage they had completely covered the mulch, so that it no longer had a repellent effect on the aphid vectors. Thereafter the incidence of mosaic increased rapidly from 2% at 41 days after sowing to 94% at 62 days after sowing, when the trial ended. Total marketable yields amounted to 33.5 t/h. Unmulched plants, however, became totally infected with mosaic 41 days after sowing, and there were no marketable fruits. 1 ref.

12/7/56 (Item 35 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2002 CAB International. All rts. reserv.

00624839 CAB Accession Number: 780767407

Response of spring soyb an to different soil-moisture regimes and straw mulching.

Prasad, K.

Publication Year: 1976

Publisher: Govind Ballabh Pant University of Agriculture and Technology

Pantnagar. -- India

Language: English

Document Type: Thesis

Secondary Journal Source: Pantnagar Journal of Research 2, 250.

Soyabeans irrigated at depletion of 25, 50 or 75% available soil moisture (ASM) gave seed yields of 2.06, 1.79 and 1.05 t/ha, resp., compared with 0.66 t without irrigation. Yields with irrigation at depletion of 50% ASM in combination with application of 10 t pigeon pea straw ****mulch****/ha were ****similar**** to those obtained with irrigation at 25% ASM. ****Mulching**** increased ****seedling**** emergence and nodulation at the flowering and pod formation stages by decreasing soil temp. and increasing moisture contents. The consumptive use of water was highest with irrigation at 25% ASM and lowest without irrigation. Mulching produced a considerable decrease in consumptive use of water and increased water use efficiency. Irrigated crops extracted most water from the top 30-cm soil layer and rain-fed crops from the deeper layers.

12/7/57 (Item 36 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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00621369 CAB Accession Number: 770761531

Developments of agronomic practices under unfavourable dryland conditions.

Samios, T.

Conference Title: Proceedings of the first FAO/SIDA seminar on improvement and production of field food crops for plant scientists from Africa and the Near East.

p.530-541

Publication Year: 1974

Publisher: FAO. -- Rome, Italy

Language: English

Document Type: Miscellaneous

Rotations, cultivation and sowing methods for improving production under unfavourable conditions without irrigation are discussed with particular reference to Cyprus. In trials incorporating either vetch (*Vicia sativa*) or subterranean clover cv. Clare into a wheat rotation, wheat cv. Kyperounda following a 3-yr subterranean clover ley gave grain yields of 2.07 t which was 43% and 88% higher than after vetch or fallow, resp. Results of incorporating *Vicia dasycarpa* or forage barley into grain barley rotations were inconclusive, but it was suggested that in areas with >450 mm well-distributed rainfall, fallow could be replaced by annual legume crops or a short legume ley. Highest yields of barley cv. Athenais were given after ploughing once in autumn and once in spring and mechanical drilling increased yields by 32% over those given by broadcasting ****seed**** at the ****same**** rate. The practice of stubble ****mulching**** and fertilizer recommendations are discussed and although N fertilizer had little effect with <300 mm annual rainfall, mechanization and improved cultivations were considered capable of stabilizing yields and increasing them to a profitable level. 10 ref.

12/7/58 (Item 37 from file: 50)

DIALOG(R)File 50:CAB Abstracts

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00389965 CAB Accession Number: 760754337

Factors involved in the decline of annual ryegrass seed on burned brushlands in California.

Papanastasis, V.

Dep. of Forestry and Conservation, California Univ., Davis, CA 95616, USA.

Journal of Range Management vol. 29 (3): p.244-247
 Publication Year: 1976
 ISSN: 0022-409X --
 Language: English
 Document Type: Journal article

The effect of amount of mulch, rate of applied N, cutting frequency and depredation by meadow mice (*Microtus californicus*) on herbage and seed production of Italian ryegrass sown in 1970 on burned brushland was studied in 1972 and 1973. In 1972, a dry year, mulching with up to 3 t dead ryegrass vegetation/ha had no effect on herbage or seed yields, but 6 t/ha reduced both seed and herbage yield. Application of 56 or 112 kg N/ha increased herbage production by 57 and 106%, respectively, and gave ****similar**** increases in ****seed**** yield; the depressing effect of ****mulch**** on herbage, but not on seed, yield was counteracted by N. In 1972, a wet year, mulch had no significant effect and N at 56 and 112 kg/ha increased herbage yields by the same amount and had no effect on seed production. Meadow mice, present in the second year at 220-420/ha, reduced herbage and seed yields. Much of the N released by burning was immobilized by the accumulation of ryegrass mulch. 24 ref.

12/7/59 (Item 38 from file: 50)

DIALOG(R)File 50:CAB Abstracts
 (c) 2002 CAB International. All rts. reserv.

00343419 CAB Accession Number: 750331104

Everbearing strawberries: is polythene the answer?

Anderson, H. M.; Guttridge, C. G.
 Commercial Grower (No.4141): p.958-959
 Publication Year: 1975 --
 Language: English
 Document Type: Journal article

Everbearing strawberries, cvs Ostara and Rabunda, planted on ridges and mulched with black polyethylene produced an average of 720 g marketable fruit/plant compared with 517 g from plants on unmulched ridges. In a second experiment ****plants**** of the ****same**** cvs ****mulched**** with clear plastic, black plastic and unmulched produced an average of 998 g/plant, 593 g/plant and 516 g/plant, respectively.

12/7/60 (Item 1 from file: 144)

DIALOG(R)File 144:Pascal
 (c) 2002 INIST/CNRS. All rts. reserv.

10885769 PASCAL No.: 93-0395133

A no-tillage tomato production system using hairy vetch and subterranean clover mulches

ABDUL-BAKI A A; TEASDALE J R
 ARS, plant sci. inst., Beltsville MD 20705, USA
 Journal: HortScience, 1993, 28 (2) 106-108
 ISSN: 0018-5345 CODEN: HJHSAR Availability: INIST-13300;
 354000033509240100

No. of Refs.: 18 ref.

Document Type: P (Serial) ; A (Analytic)
 Country of Publication: USA
 Language: English

A novel approach is described for using two winter annual legumes-hairy vetch (*Vicia villosa* L. Roth.) and 'Mt. Barker' subterranean clover (*Trifolium subterraneum* L.)-as cover crops and plant mulches in tomato (*Lycopersicon esculentum* Mill.) production. The approach calls for sowing the cover crops in the fall in prepared beds, mowing the covercrops with a high-speed flail mower immediately before transplanting the tomato seedlings into the field in early May, and then transplanting the seedlings

into the beds with minimal interruption of the soil or mulch cover. Plants in the vetch treatment with no tillage produced a higher yield than those grown under black polyethylene, paper, or no mulch in conventional systems. Both ****plant**** ****mulches**** delayed fruit maturity by ****similar**** = 10 days relative to black polyethylene ****mulch**** ()

12/7/61 (Item 1 from file: 203)

DIALOG(R)File 203:AGRIS

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02120376 AGRIS No: 97-063073

Incidence of mungbean insect pests as affected by fertilization and cultural management practices

Domingo, D.S.; Paraon, E.U.; Alpuerto, V.V.; Pablico, S.M. (Mariano Marcos State Univ., Batac, Ilocos Norte (Philippines))

Conference Title: 9. Scientific Meeting of the Federation of Crop Science Societies of the Philippines

Conference Location and Year: Aklan (Philippines), 10-14 May 1993

Journal: Philippine Journal of Crop Science, May 1993, v. 18(supplement no. 1) p. 10

Notes: Summary only ISSN: 0115-463X Notes: Issued Jun 1996

Language: English

Place of Publication: Philippines

Document Type: Journal Article, Conference, Summary

Journal Announcement: 2305 Record input by Philippines

Abstract in English

The study was conducted to determine the incidence of mungbean insect pests as affected by fertilization and rice stubbles management. Cost and return analysis of the treatments were also compared. Results showed that Rhizobium inoculation and inorganic fertilizer application had no significant difference on the incidence of beanfly, bean weevil, and green leafhopper. Rhizobium inoculation, inorganic fertilizer application and presence of rice stubbles did not contribute considerably to the reduction of insect damage. Instead, rice stubbles could have provided favorable microclimatic conditions that enhanced soil moisture and nutrient uptake, normally experienced in ****plants**** with straw ****mulch**** because the stubbles served the ****same**** purpose. ****Seed**** yield of mungbean (MG 50) at 0.87 t/ha is considered low by average normally obtained in the Ilocos region [Philippines]. This was attributed to low plant population (200,000 plants/ha compared to the recommended 400,000 plants/ha which is usually experienced when mungbean is planted immediately after rice. Cost and return analysis showed that Rhizobium inoculated mungbean with rice stubbles had higher net income per ha (P4,190.00) and return of investment P1.11) than inorganic fertilizer application. This means that Rhizobium inoculation with rice stubbles can be more profitable than application of inorganic fertilizer either with or without stubbles.

12/7/62 (Item 2 from file: 203)

DIALOG(R)File 203:AGRIS

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01204683 AGRIS No: 87-050313

Response of coconut [Cocos nucifera] nursery seedlings to some cultural treatments in Nigeria

Iremiren, G.O. (Federal University of Technology, Akure (Nigeria))

Conference Title: International Conference on Cocoa and Coconuts:

Progress and Outlook

Conference Location and Year: Kuala Lumpur (Malaysia), 15-17 Oct 1984

Cocoa and coconut: progress and outlook

Pushparajah, E.; Chew, P.S. (eds.)

Publisher: Incorporated Society of Planters, Kuala Lumpur (Malaysia),

1986, p. 861-867

Notes: 7 tables; 9 ref

Language: English Summary Language: English

Place of Publication: Malaysia

Document Type: Analytic, Monograph, Conference, Summary

Journal Announcement: 1306 Record input by Malaysia

Abstract in English

Three nursery agronomic experiments were carried out separately for Nigerian Tall Green (NTG) and Nigerian Dwarf Yellow (NDY) coconut varieties. At the Nigerian Institute for Oil Palm Research Main Station, Benin City, ****similar**** growth occurred in coconut ****seedlings**** in polybag ****mulched**** with oil palm bunch and those without mulch application. This was attributed to the thick husk of the intact nut which serves as a natural mulch and minimised the influence of the bunch refuse ****mulch****. ****Seedling**** growth parameters, including total dry weight, were ****similar**** at spacing treatments of 30 x 30 cm, 45 x 45 cm, 60 x 60 cm and 75 x 75 cm, except for seedling height and leaf area index which decreased significantly with wider spacings. These were due to etiolation and fewer seedlings per unit land area. The interactions between spacings and sowings in groundbeds and polybags were non-significant. Although growth parameters were also similar in seedlings sown in groundbeds and polybags, the latter system was favoured because of the lower seedling transplanting stress associated with it. At NIFOR Coconut Substation, Abia, both watering at 2-5 litre per seedling per week and overhead shade in the dry season did not significantly influence seedling growth and non-significant interactions occurred. It was recommended that both NTG and NDY coconut varieties should be grown in polybags in the nursery, at a spacing of 30 x 30 cm, without mulch application. Also, watering at the rate of 2 litres per seedling per week in the dry season, without overhead shade, appeared adequate in the Abia area.

12/7/63 (Item 3 from file: 203)

DIALOG(R)File 203:AGRIS

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01149537 AGRIS No: 86-051926

Effect of the different shading and mulching materials in the growth and quality of tobacco transplants

Retales, R.O.; Mosura, E.F.; Simeon, M.D.

Philippine Tobacco Abstracts 1984-1985

Mariano Marcos State Univ., Batac, Ilocos Norte (Philippines).

Philippine Tobacco Research and Training Center, 1985, p. 16

Notes: Received Sep 1985

Notes: Summary only (En)

Language: English

Availability: Philippines Center

Document Type: Analytic, Monograph, Summary, Nonconventional

Literature

Journal Announcement: 1209 Record input by Philippines

Abstract in English

Rice hull mulch produced tobacco seedlings with significantly longer shoot (11.2 cm), heavier direct root (6.3 g) and shoot (32.8 g) than the other shading and ****mulching**** materials and were ****similar**** to those ****seedlings**** shaded with nipa shingles. Seedling from central plot (no shades nor mulch) had the shortest root and shoot length (2.1 and 1.3 cm, respectively), least number of smallest stem diameter (1.3 mm) and lowest shoot and root dry weight (0.8 and 3.5 g, respectively). Based on the result, rice hull can be used as mulch in the production of tobacco seedlings.

12/7/64 (Item 4 from file : 203)

DIALOG(R)File 203:AGRIS

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01102190 AGRIS No: 85-106680

Increasing corn yields by mulching with ipil-ipil (Leucaena leucocephala) Philippines

Dofelis, G.; Nesbitt, H.J.

Betinan Research Station, San Miguel, Zamboanga del Sur (Philippines)

Conference Title: 15. Annual Scientific Conference of the Crop Science Society of the Philippines

Conference Location and Year: Batac, Ilocos Norte (Philippines), 16-18 May 1984

Publisher: , San Miguel, Zamboanga del Sur (Philippines), 1984, 14 leaves

Notes: 16 ref. Received Jun 1984

Language: English Summary Language: English

Place of Publication: Philippines

Availability: Philippines Center

Document Type: Monograph, Conference, Summary, Nonconventional

Literature

Journal Announcement: 1112 Record input by AIBA (Agr Information Bank for Asia)

Abstract in English

Ipil-ipil (Leucaena leucocephala) foliage was mulched into soil beneath a corn crop when hedges of the legume were approximately 1.5 to 2.0 m tall. The green leaf and small stem material was either cut from hedges of the legume growing within the corn crop or carried to the site from a nearby source of ****similar**** aged ****plants****. For the first three croppings ****mulching**** ipil-ipil made little difference to corn yields. In the following three croppings corn production improved by up to 300% with the addition of 7-10 t/ha per cropping of green leaf material. Applying fertilizer masked much of the yield advantage.

?

14/7/1 (Item 1 from file: 5)
 DIALOG(R)File 5: Biosis Previews(R)
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08351618 BIOSIS NO.: 000094092141

FOSTERING HOUSE MICE ONTO RATS AND DEER MICE EFFECTS ON RESPONSE TO SPECIES ODORS

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 AUTHOR ADDRESS: DEP. PSYCHOL., EAST CAROLINA UNIV., GREENVILLE, N.C.
 27858-4353.
 JOURNAL: ANIM LEARN BEHAV 20 (3). 1992. 253-258. 1992
 FULL JOURNAL NAME: Animal Learning and Behavior
 CODEN: ALBVA
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

ABSTRACT: Newborn wild house mice (*Mus musculus*) were fostered upon maternal conspecifics, prairie deer mice (*Peromyscus maniculatus bairdi*) or laboratory rats (*Rattus norvegicus*). Male subjects were weaned into individual cages, in which they remained until testing commenced. At 35 days of age, subjects were given a four-choice test in which they had the opportunity to investigate tunnels **scented** with clean **wood** **chips** or with chips soiled by an adult male conspecific, deer mouse or rat. Compared to the *Mus*-nursed and *Peromyscus*-nursed mice, *Rattus*-nursed mice were more active during the test and less reluctant to investigate the *Rattus*-scented tunnel. These results were replicated in a two-choice test (*Mus*- vs. *Rattus*-scented tunnels) that included a group of mice fostered onto conspecific, but with *Rattus* scents present in the maternity cage throughout the nursing period. Early exposure to the scent of *Rattus* had no significant effects on the responses of *Mus*-nursed mice to the scent of *Rattus*.

14/7/2 (Item 1 from file: 99)
 DIALOG(R)File 99: Wilson Appl. Sci & Tech Abs
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1881264 H.W. WILSON RECORD NUMBER: BAST99034238

The many colors of mulch

Farrell, Molly;
 BioCycle v. 40 no5 (May 1999) p. 42-3+
 DOCUMENT TYPE: Feature Article ISSN: 0276-5055

ABSTRACT: The U.S. is witnessing a huge growth in the colored mulch industry. Started 10 years ago to turn unusable pallets into a revenue source, the business of producing colored and even **scented** **mulches** has grown so much that the number of mulch colorant and coloring equipment manufacturers is increasing. Red remains the most popular color, although demand for brown, gold, and black mulches is also strong.

14/7/3 (Item 1 from file: 144)
 DIALOG(R)File 144: Pascal
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05823145 PASCAL No.: 84-0324464
Valorisation, par compostage, de la paille de lavande
(Valorization by composting of lavender straw)
 COLOMBOT P
 Journal: Comp. Inf., 1984 (16) 6-9
 Availability: Institut national de la recherche agronomique (INRA, France)-P 4144
 Document Type: P (Serial) ; A (Analytic)